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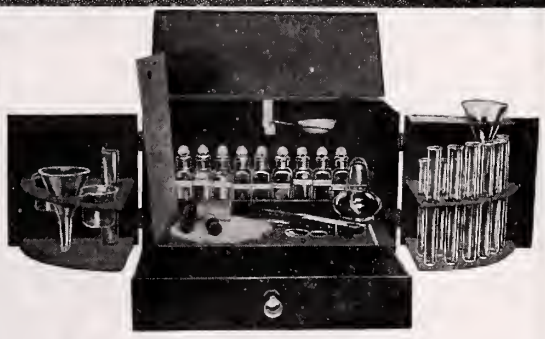

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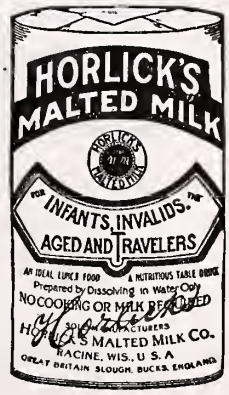
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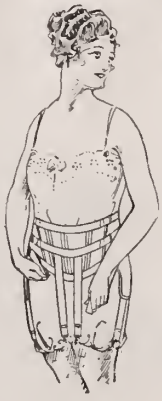

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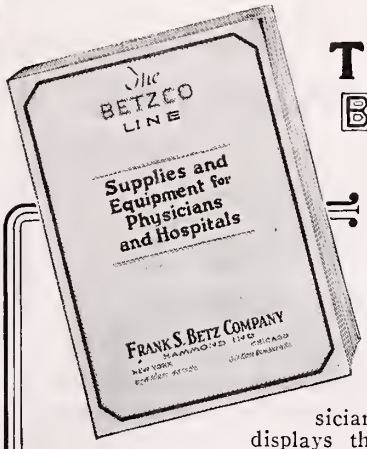

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ORIGINAL ARTICLES

LUNG ABSCESS FOLLOWING TONSILECTOMY.*

DR. F. NOLTON BIGELOW.
PROVIDENCE, R. I.

I have been asked to take part in this symposium by discussing the pulmonary complications that may follow tonsil operations. I have no desire, however, to pose as an expert on lung abscess following tonsilectomy, for that is a distinction I would gladly leave to others. Tonsilectomy is performed so frequently that the old adage, familiarity breeds contempt, is here exemplified in that the laity have come to look upon it as a very trifling procedure. This attitude should be discouraged, for no operation is entirely devoid of danger and if unduly minimized the surgeon is more than likely to be held personally accountable for an unfortunate outcome that may be but one of the hazards of the operation and not *prima facie* evidence of negligence or lack of skill. There are certain complications for which both the operator and the patient are more or less prepared, such as hemorrhage, for example; but to have so distressing a complication as lung abscess follow an apparently ordinary and otherwise successful tonsilectomy is a nerve-racking experience not soon to be forgotten. Any of the pulmonary complications incident to anesthesia are possible sequelæ of tonsilectomy, but lung abscess is by far the most disastrous and the one most dreaded.

The incidence of this complication to tonsilectomy was unknown till some ten years ago when the first cases were reported by Richardson of Washington. This report was followed from time to time by other reports from various parts of the country, those of this year recording some two hundred cases. As a general anesthetic was employed in the cases first reported, many writers contended that this complication could be avoided by employing local anesthesia. This opinion, however, is no longer tenable in view of the fact that out of 202 cases reported in the *Journal of the A. M. A.* for April 29th of this year, 39 followed local anesthesia. From the statistics in this report it would seem as if lung abscess occurred in one out of every 2,500 to 3,000 tonsilectomies.

There are three possible routes by which infection may reach the lung; namely, by way of the lymph channels, the blood stream or by direct inhalation. The first mentioned route is not very probable, but it is theoretically possible for infection to reach the lung by way of the blood stream. Following the removal of a tonsil, a vein as large as a goose quill is often seen extending the entire length of the posterior pillar and, if not seen, its presence is often made manifest by profuse and persistent bleeding. In order to control hemorrhage it is often necessary to crush or ligate this or other bleeding points, a procedure that probably produces thrombosis in these vessels. Since a tonsilectomy wound is always septic, as shown by the slough that persists for about a week, such thrombi might easily become infected, dislodged and carried through the heart into the pulmonary circulation. However, the fact that the majority of abscesses occur in the lower lobe of the right lung would seem to indicate that the more usual route is by direct inhalation; a conclusion that naturally follows from the fact that the right bronchus continues almost directly downward from the trachae, while the left bronchus branches off at right angles.

It is unknown as to just what is the exciting cause of the infection. This role has been ascribed to blood, mucus, vomitus and detached pieces of tonsil or adenoid, all of which may, presumably, be inhaled at some time or other. The most probable source of infection, however, is the plugs of caseous material that so frequently fill the crypts of chronically infected tonsils and which if present are always extruded during a tonsilectomy. This supposition is further borne out by some recent bacteriological studies that would seem to indicate that these caseous plugs are really masses of bacteria closely allied to the spirochaetes and the fusiform bacilli of Vincent's angina, a disease characterized by an ulcero-gangrenous process of the soft structures of both mouth and pharynx.

*Discussion in Symposium before the Providence Medical Association November 6th, 1922.

from R I Med. Soc.

According to the various reports, the time between the tonsilectomy and the onset of symptoms varies from twenty-four hours to three weeks, the average being about a week. In the two cases that it was my misfortune to have develop in the early days of my own practice, no localizing signs developed during the first week, the symptoms and general course of the disease being almost identical in both instances. For the first week there was some prostration, but no more than often occurs. Practically every tonsilectomy is followed by a rise of temperature ranging from 99° to 101°, but this usually subsides within two or three days. In these two cases, however, the temperature following the operation never once came back to normal, but ranged from 99° to 100°. This slight but persistent elevation of temperature is probably the earliest and the most reliable symptom of impending disaster. So much do I believe this to be the case, that I always feel a patient safe from this dread complication once the temperature has hit the normal line, even though it refuse to remain there or the patient develop a cough or other symptoms suggestive of pulmonary complication. Thus far my confidence in this sign has been amply justified. By the end of a week both patients developed a hacking cough and from then on the prostration became more pronounced, the temperature steadily mounting, with the morning remissions of a typical septic process. The pulmonary signs were at first indefinite but after two weeks were unmistakable and readily confirmed by X-ray examination, the abscess being localized in one case in the right lower lobe and in the right apex in the other. The expectoration, which was scanty at first, became more and more abundant. Both patients appeared very septic and for about two months raised large quantities of foul, purulent sputum. The symptoms then gradually improved, the expectoration became less abundant, the temperature slowly subsided, the physical signs became less pronounced and after about three and a half months from the date of the operation both patients had completely recovered.

Judging from the reports, spontaneous recovery is not the rule, the majority of cases requiring some form of surgical intervention. I saw one other case following a tonsilectomy that had been performed by a colleague some three months previously. The temperature, general malaise, cough and foul sputum left no doubt as to the diagnosis, which was confirmed both by physical and X-ray examination. This patient was put to bed and completely recovered in about two weeks. A word of warning to those who have performed numerous tonsilectomies without the occurrence of a lung abscess. It is barely possible that this clean record be more apparent than real, for these cases are likely to drift into other hands, as did the case above cited.

As this complication is probably more prevalent than the reported cases would indicate, how it may be prevented or its occurrence reduced to a minimum is a problem of the greatest importance; a problem, needless to say, to which I have given much anxious thought, soliciting the aid of anesthetists, internists and others in the endeavor to arrive at an adequate solution. It is my personal opinion that the occurrence of this complication may be greatly reduced, if not entirely obviated, by an anesthesia so light that the laryngeal reflex remains active. The larynx might be termed the watch dog of the lungs and while it remains on guard no intruder can gain entrance without meeting with strenuous resistance. This is made manifest by a muscular contraction closing the glottis, followed by a cough that tends to expel the would-be invader. I also believe it bad practice to give an injection of morphine and atropine preliminary to tonsilectomy, as morphine tends to abolish the cough reflex, while atropine dries up the bronchial secretions that might otherwise flush out such inhaled material as may have eluded the larynx. These objections no longer hold after the operation is completed and the patient put to bed in a position that allows secretions to gravitate from the mouth. So light an anesthesia adds to the difficulty of the operation, for it is obviously harder to operate on a patient who is coughing and spitting than on one whose throat is perfectly quiet. However, this disadvantage is soon overcome by practice, the added assurance against pulmonary complications being well worth the additional effort.

Some form of suction apparatus for the continuous removal of blood and secretions is undoubtedly of prophylactic value; it is not an absolute preventative, however, as this was used in one of my cases. The practice of pulling the tongue or jaw forward, especially with the patient in the

upright position, is to be condemned; for this procedure converts the hypo-pharynx into a funnel whose spout consists of the larynx and trachae. The combined mouth gag and tongue depressor that fixes the tongue downward and forward probably produces the same favorable condition for the entrance of septic material into the lower air passages.

At first glance it would seem that in lung abscess following local anesthesia, the infection must be of embolic origin. Yet, this does not necessarily follow, for, as was pointed out by Moore in the report above mentioned, Chevalier Jackson has demonstrated that the entire larynx may be anesthetized by painting the base of the tongue with an 8% solution of cocaine. Before injecting the tonsils with a local anesthetic, it is quite customary to swab the pharynx and the base of the tongue with a cocaine solution in order to prevent retching and gagging. The laryngeal reflex will then be abolished quite as effectively as by a profound general narcosis, with about the same possibility of inhaling infected material.

As to the relative safety of the various positions used in the performance of this operation, the upright position is universally condemned by those who have never employed it. In Moore's paper it is classed with the semi-recumbent. To my mind, these two positions have nothing whatever in common; for in the former, when properly carried out, the patient is upright for only the brief time necessary to engage the tonsils and adenoids in the instruments employed for their removal and for the after inspection of the throat. At all other times the body is bent forward at the hips so that blood and secretions drain out of the mouth. Such is evidently not the case with the patient semi-recumbent.

Except that blood and secretions may, perhaps, be removed more effectively by suction, both the supine and the lateral positions are, in my opinion, fully as dangerous if not more so than the upright. With a patient in the lateral position blood and secretions will of course drain into the lower cheek, to be easily removed by sponging, suction or merely rotating the head. However, it is practically impossible to perform a tonsilectomy with the patient actually sidewise. So far as I have observed the so-called lateral position as carried out in practice, the patient, to all intents and purposes, lies on his back with merely the head turned sidewise. As the mouth is higher than the pharynx, these cavities are not drained by gravity; hence, this position offers no apparent advantage over the supine, with the head facing upward. Leaving out of account both sponging and suction; in the upright position blood and secretions either drain from the mouth or are swallowed, while in both the lateral and the supine positions they are mostly gargled. Though in the latter case infected material will not reach the lowermost bronchus by mere force of gravity, yet this apparent advantage is neutralized, in my opinion, by the unfavorable position for coughing.

What is the natural position for a person to assume when stricken with a fit of coughing? Certainly not flat on the back, but upright with the body bent forward, for in this position the expulsive effort is the most productive. Following laryngo-fissure for the removal of laryngeal tumors, it was customary to elevate the foot of the bed in the endeavor to protect the lungs from blood and mucus. The latest work on this subject advocates that, following operation, the patient be bolstered upright; the author's experience being that the lungs will be better protected with the patient in the most favored position for coughing. In view of its many advantages, it would seem as though the upright position, if properly carried out and accompanied by an anesthesia that preserves the laryngeal reflex, should not be ruled out of court a priori.

Theoretically, either the low Trendeldenberg or the Rose position in which the head hangs off the table are ideal for the performance of tonsilectomy, for in these positions the drainage is all away from the larynx. However, an experience sufficient to acquire the necessary technique, leads me to believe that the objections to these positions outweigh their one advantage, great though it may be. It is self evident that with blood and secretions draining into the naso-pharynx, which is now the lowest point of the respiratory tract, some of this septic material is liable to reach the middle ear. Although a middle ear infection is usually a matter of no serious consequence, yet inherent in every such infection is the possibility of intracranial complications, even more disastrous than those that occur in the lungs. For example, with lung abscess there is some chance of recovery,

with meningitis of otitic origin, practically none.

Another serious and ever present objection to both the Rose and the Trendeldenberg positions is that of hemorrhage. With the head lower than the rest of the body, the initial hemorrhage is always more profuse; furthermore, it is extremely difficult and sometimes impossible to locate the bleeding points with the head in this position. If one is content to assume that the bleeding will stop of itself, well and good; but to rely on this too strongly is to court disaster as serious as the one we attempt to avoid, either of which may be fatal. So far as results are concerned, it matters but little if the ticket for Chron's ferry be labeled lung abscess or post-operative hemorrhage, though the latter be the easier—certainly the more expeditious mode of embarkation.

While it is true that most post-operative hemorrhages are unattended by serious consequences, providing they be dealt with promptly and efficiently, yet these occasions are none so joyous as to call for frequent encores. Even though life be not immediately endangered, the depletion may prolong the convalescence and render the patient more liable to infection. Lung abscess has been reported as a sequence of hemorrhage following tonsilectomy.

Prevention is by far the best treatment of hemorrhage. A preliminary coagulation and bleeding test will rule out the more serious cases, while an operative position that conceals no bleeding points, if they be but looked for, should eliminate practically all primary hemorrhages. It is my experience that in this respect the upright position is paralleled by no other.

The removal of caseous plugs as soon as extruded is a prophylactic measure of the greatest importance. Squeezing the tonsil before beginning the enucleation will often remove some of these plugs, but I know of no method short of removing the tonsil itself that will get rid of all.

As to general measures, it seems self evident that tonsilectomy should not be performed if there be any active inflammation of either the upper or the lower respiratory tract. Notwithstanding the fact that an occasional writer advocates the removal of acutely inflamed tonsils or those with abscess involvement, it is the custom of most laryngoloists to delay operation from one to two weeks after the disappearance of all signs of acute inflammation.

It is also a good rule not to operate if there be even the slightest rise of temperature or if the patient have a cough, unless it be clearly demonstrated that this is of no significance. As regards lung abscess of embolic origin, a minimal amount of trauma by dissectors, sponges and the like would appear to be the best prophylactic. Whether the anesthetic be local or general, the patient should be kept in bed till the temperature returns to normal. Though common to most hospitals, the practice of removing a patient's tonsils and then leaving him almost entirely to his own devices, is not one to be commended.

Very little need be said as to treatment, as this problem is necessarily passed on to the internist and the surgeon, to solve as best they may. Richardson of Washington advocates the production of an artificial pneumo-thorax as soon as the diagnosis of lung abscess has been definitely established. Treatment by suction applied through a bronchoscope at first gave some promise of success, but judging from later reports, this procedure, which appears so rational and so well calculated to give relief, has not lived up to its expectations. This method of examination, however, has added to our knowledge of the pathology of this disease. In several cases the cavity was evacuated and then filled with a bismuth mixture, the subsequent X-ray examination disclosing the fact that the involvement of lung tissue, as shown by physical and ordinary X-ray findings, is out of all proportion to the size of the abscess cavity.

Should I ever again encounter this complication, as of course I may, there is a therapeutic measure that I would try, though I have never heard of its being advocated for this purpose. I refer to the intravenous injection of one of the arsenical compounds. It seems to be generally agreed that caseous material from the tonsils is the chief etiological factor in the production of lung abscess following tonsilectomy. If this material consist of bacteria closely allied or identical with the organisms of Vincent's angina, as recent investigations seem to indicate, we are then justified in the presumption that the lung infection begins as an ulcero-gangrenous process, similar to Vincent's angina, as commonly seen in both mouth and pharynx. It is a well known fact that this disease resolves very promptly following the use of salvarsan or one of the other arsenicals, especially when given intravenously. It would therefore seem logical to ad-

minister the same drug to cases of lung abscess following tonsilectomy, providing the treatment be given while the disease is still in the ulcero-gangrenous stage. After the occurrence of secondary infection and the development of a definite abscess cavity this or any other medication will probably be of little or no avail.

To remove the need for an operation is, of course, the best preventative of its after complications. This has been the aim of all true surgeons throughout the ages, and one not infrequently attained. For example, improved obstetrics has rendered all but obsolete certain plastic operations, while both radium and X-ray are gradually supplanting surgery in the treatment of malignant tumors. The tonsil operation is no more sacro-sanct than any other, and any means under heaven that will really make its performance unnecessary will be gladly welcomed by the laryngologist. For who else has a better appreciation of its many discomforts and attendant dangers?

It has been widely heralded that both radium and the X-ray will prevent lung abscess following tonsilectomy by doing away with this operation altogether. If this be true, well and good, the laryngologist need fear no prospective loss of income; for if nurses and orderlies can be trusted to manipulate an X-ray machine, so can he or his office assistant; but first be it said, that methods dictated by years of experience are not lightly to be thrust aside; though we deplore their faults, yet we know them and are, to this extent, forewarned. I have found the X-ray, when in competent hands, to be a safe and certain means for removing the masses of lymphoid tissue so frequently found at the base of the tongue and believe it should be tried wherever tonsilectomy is contra-indicated because of age, hemophilia, or some other general condition; yet neither radium or the X-ray will greatly reduce the occurrence of lung abscess, unless they be applicable to practically all tonsil cases. As it takes at least four months to complete an adequate course of X-ray treatments, those cases requiring immediate relief must be treated by other means. The originators of the treatment claim that the X-ray renders a tonsil innocuous, not by sterilizing its contained bacteria, but by causing a complete regression of its lymphoid structures that both broadens and shortens the crypts. But if after the prescribed course of treatment there be little if any regression and, so far as appearances go, the tonsil remain as before—this by the way, being my usual experience—how is one to know if the tonsil be innocuous or not? Consider then that large group of cases in which the tonsil is a probable source of focal infection. To my mind X-ray therapy seems most futile for this group, taken as a whole.

It was once my custom to suggest X-ray as a possible preventative of future trouble where the tonsils were, perhaps, questionable but without history, signs or symptoms sufficient to justify their removal. But after three patients developed tonsilitis—one case followed by quinsy—while under treatment, it seemed preferable to remove such tonsils or else let them alone. Though these occurrences might be explained as mere coincidence, they were fairly convincing to me and decidedly so to the patients, especially the two—one of whom had quinsy—who thus had their first experience with tonsilitis. As the aim of X-ray therapy is the destruction of the lymphoid tissue of the tonsil, in the cases cited it seemed probable that the tissues thus damaged were rendered, temporarily at least, more susceptible to infection.

There is no apparent advantage in substituting one danger for another. The sequelæ of tonsilitis are more numerous, more frequent and many of them as fully or more disastrous than those of tonsilectomy. Arthritis, endo- and peri-carditis, general sepsis, peri-tonsilar abscess followed by jugular thrombosis and pyemia, edema of the larynx, peritonitis, meningitis, pneumonia, empyema and even lung abscess, these, singly or in combination, are all a possible sequence of an attack of tonsilitis. A therapeutic agent capable of precipitating such an attack, with all its grizzly possibilities, is certainly not an ideal substitute for present methods. It, therefore, seems self evident that X-ray therapy of the tonsil is not destined to greatly reduce the occurrence of lung abscess following tonsilectomy by making the performance of this operation "a thing of the past." It is but fair to state, however, that untoward symptoms have yet to develop in those cases in which the X-ray has been definitely indicated, for the reasons above cited, and that up to date the results in such cases have been highly satisfactory.

Little need be said as to radium as a substitute for tonsilectomy, for the insufficient supply of this

element greatly limits its use in tonsil therapy. Its advocates claim a more certain and rapid regression of the tonsil than that which occurs after X-ray. So far as its general applicability is concerned, it seems to my limited experience, that after the cocainization necessary for the insertation of needles or the accurate placement of applicators, the tonsil might as well be removed and done with. The manipulations necessary for radium therapy seem well calculated to express some caseous material from the tonsilar crypts; hence, when we recall the fact that cocainizing the base of the tongue also makes the larynx anesthetic, it seems self evident that this treatment is no preventative of lung abscess, so far as inhalation is concerned. Though the insertation of emanation seeds require little or no cocainization, they are likely to slough out or to be otherwise extruded; if inhaled, these seeds, small as they are, would be no better tolerated than any other foreign body.

Suffice it to say that tonsilectomy is still an ever present necessity, for methods entailing their own peculiar dangers are not satisfactory substitutes. After all is said and done, disastrous results from tonsilectomy are far from common, though this but enhance the tragedy of those that do occur. For the present, at least, the pulmonary and other possible sequelæ of tonsilectomy are not to be done away with by abolishing the operation itself, but, rather, by the elimination of unnecessary operating, by a reasonable attention to both local and general conditions and by a technical skill commensurate with the difficulties and possible dangers.

THE QUESTION OF CHRONIC EMPYEMA AND ITS TREATMENT.*

By Dr. Frederick V. Hussey.
Providence, R. I.

Probably no type of case is more unwelcome on the general surgical service of any hospital than the type of chronic empyema and probably no type of case tries more the patience of the average surgeon than does this one because of the usually unsatisfactory results following operation which in general has been obtained. In the past this has largely been due to the fact that the underlying causes of chronic empyema have not been understood, and as a consequence, appropriate measures have not been instituted and carried out. Due to the rather intensive study and investigation of acute empyema during the late war, the treatment of that condition has been very much improved and practically standardized, and as a result the incidence of chronic empyema has been very much lessened. The treatment of chronic empyema should begin with the treatment of the acute form, as the chronic type is always the result of improper or inefficient treatment of the acute type, plus certain factors which lead to chronicity. With proper care from the very beginning of the onset of the empyema, practically all cases should be cured before they have become chronic, and in those cases which are not, the cavity is not obliterated before changes have taken place which prevent healing.

As one surgeon has said, "The term of chronic empyema is indefinite." The best definition is based on tissue changes. It consists of an undrained abscess or an undrained and suppurating abscess cavity situated within the pleural cavity and surrounded by a relatively avascular wall, composed chiefly of fibrous tissue elements. When this condition has once taken place, the disease has progressed from an acute to a chronic stage and the treatment must change accordingly.

There are certain factors which predispose to chronic emypema.

(1) Poor general condition with lowered resistance on the part of the patient.

(2) Infection with certain types of organism which predispose to chronic inflammatory processes; and

(3) Improper care during the acute stage of the empyema.

In my opinion, this last factor is the most important, as it is the most frequent cause of chronicity. It is not the purpose of this paper to go into the question of the proper treatment of acute empyema, hence we will not touch upon that question, but it does seem imperative that any man who undertakes the treatment of the acute type should be familiar with the methods most approved of, and in consequence be able to reduce as much as possible the development of chronicity.

The immediate causes of chronicity are:

(1) Infection with certain types of organisms,

*Read before the Rhode Island Medical Society December 2d, 1922.

such as streptococaus haemolyticus, which are productive of chronic inflammatory changes and which are resistant to treatment from the beginning. One hundred per cent in influenzal empyema.

(2) Improper drainage originally. This may be due to the fact that the drainage was not instituted at the lowest point of the cavity, and a dependent pocket results which does not drain properly, or there may be a long narrow sinus which leads from the abscess cavity to the outside of the chest wall and which causes backing up due to an insufficient outlet; or there may be a secondary cavity or cavities communicating by small openings with the main cavity and which, as a consequence, do not drain properly. Found in 75%.

(3) There may be a bronchial fistula or fistulæ communicating with the empyema cavity which is a constant source of infection and prevents healing. Found in 60.8%.

(4) Foreign bodies which may be confined within the cavity or sinus, such as a drainage tube which has slipped into the cavity, missiles, sequestrated fragments of ribs which have dropped back into the cavity, et cetera. Found in 15%.

(5) Osteomyetitis of the ribs due to the original infection or pressure of the original drainage tube and secondary infection. Ninety per cent.

(6) And residual faci found in the walls of the cavity which resist all attempts at sterilization.

Treatment.

The treatment of these cases of chronic empyema consists of preoperative, operative and postoperative measures. It should be borne in mind that these cases have been of months and often years duration and consequently have a very much lowered resistance which causes them at the best to be poor surgical risks for much operative interference at any one time. As a consequence, often times considerable care must be exercised to build up as much as possible their general condition. On their admission they should be placed on a diet of high caloric value and proper hygienic measures should be instituted for a greater or shorter length of time. During this period the nature of the case should be studied to determine as closely as possible the underlying conditions which are producing the chronicity. A careful history should be obtained and cultures of the cavity should be made to determine the type of the infecting organism, the sputum should be examined for tubercle bacilli; the chest should be examined for physical signs of the same, a Wasserman test should be made to determine the presence or absence of syphilis. A routine urinalysis and blood examination should be made and the patient should be typed because of the possible need of transfusion before or after the operation. The size, location, shape and capacity of the cavity should be determined, also the nature of the sinus, whether long or short, narrow or tortuous. The capacity may be determined in the absence of other than small bronchial fistulæ by finding the amount of fluid necessary to fill it, the location, size and shape of the cavity and the nature of the sinus leading into it may be determined by injecting the cavity and sinus with a bismuth or barium emulsion and X-raying them. Following this, if no large bronchial fistulæ are present a preliminary sterilization by the Carrel-Dakin method should be attempted to clean up as much as possible what infection may be present. It is unfortunate that there are not more internes trained in and familiar with this technique, as I believe it should be a very valuable part of the preoperative and postoperative treatment.

When the favorable time for active operative measures has come, the question comes up, What shall be done?

I do not believe that any one type of operation is applicable to all cases, but that several different operative procedures may be necessary in the same case. It must be remembered that practically all of these cases are poor surgical risks to start with because of the length of standing and the consequent lowering of vitality. Only so much operative work should be carried out at any one time as the patient's strength will safely permit. The operation must be stopped at any time when the patient's condition becomes such as to make further work a serious matter, and taken up again when his condition warrants it. In this way it may be necessary to operate several times before the ultimate object has been attained. What is the end to be accomplished by any type or types of operation? The first desideratum to be sought for is sterilization, if possible, of the abscess cavity. After that has been accomplished the abscess cavity must be obliterated either by, (1) Expansion of the lung; (2) Retraction of the chest wall; (3) or by a combination of both procedures together with proliferation of scar tissue.

The choice of surgical treatment in all cases of chronic empyema has been between simple drainage and some type of operation designed to expand the lung, collapse the chest wall, or both. The order of operative procedure should be, (1) Sterilize the abscess cavity; (2) Expand the lung; (3) Collapse the chest wall.

1. In order to sterilize the abscess cavity, it should be thoroughly exposed by dissecting up a flap of the soft parts of the chest wall and resecting a portion of as many ribs as is necessary to lay open the cavity in its entire extent. A search should be made for accessory cavities which may not have been discovered by X-ray examination because they may communicate with the main cavity by such small sinuses that they could not become filled with the barium or bismuth mixture. If any accessory cavities are discovered, they in turn should be exposed in their entirety by a further dissection of the flap of soft tissues and removal of as much of the bony structure of the chest wall as may be necessary. During this procedure a bronchial fistula, if it exists, will be discovered opening into the main cavity or an accessory cavity, and if such a fistula is found, it will have to be dealt with in such a manner as to promote closure. Most fistulous openings, if small in size, when efficient exposure and drainage has been established, will heal spontaneously. Larger fistulæ will require cauterization, excision of the cicatricial tissue about the opening and inversion of the edges before a healing will result. Occasionally freeing up a muscle flap and fixing it in the cavity over the fistulous opening will result in healing. There is no absolute method of closure, and closure and healing itself is not without some risk, as occasionally it is followed by the formation of lung and brain abscesses, which complication occurred in a case operated on by the writer at the Rhode Island Hospital this fall, and which has been reported by other operators as occasionally occurring. Of course during the procedure of exposing the cavity, all foreign bodies may be removed and also any osteomyelitic ribs. The abscess cavity or cavities should be left exposed, Carrell tubes should be inserted properly and the wound Dakinized until sterile cultures are obtained. In all cases where the empyema has become chronic because of faulty drainage through dependent pockets, accessory cavities, foreign bodies and at times, bronchial fistulæ, such measures alone are sufficient to promote healing. In those cases, after the abscess cavity has become sterilized, closure of the cavity may be accomplished later by a secondary suture of the skin and muscle flaps.

2. In cases where there is a large cavity, due to collapse and fixation of the lung, an attempt should be made to bring about an expansion of the lung to completely or partially obliterate the cavity. This may be done in one or two ways; (1) by decortication of the lung, (2) or by dissission according to the method of Ransohof.

Decortication of the lung may be attempted and in some cases will be successful, but it is impossible in many instances because the long standing inflammation has produced a prolongation of fibrous tissue from the parietal pleura into the lung and the separation of the pleura from the surface of the lung will cause profuse bleeding and tearing away of the lung tissue. In such cases the dissission method of Ransohof may be carried out in which parallel incisions are made through the pleural covering down to lung tissue with cross incisions in an attempt to free the lung and permit expansion.

3. If such measures are not sufficient to bring about healing, then the chest wall must be collapsed in a still further attempt to obliterate the cavity within the thorax. Thoracoplastic operations for collapse of the chest wall are serious in that they are shocking operations in patients who are naturally in a state of lowered resistance. They should not be undertaken until the case has been under complete observation and has ceased to progress. These operations consist of removal of the bony structure of the chest wall in an attempt to produce collapse of the wall sufficient to obliterate the remaining cavity. If this cannot be accomplished, entirely another procedure of forming a muscle flap and turning it into the remaining cavity with fixation there may be sufficient finally to obliterate the cavity and to result in complete healing. Of course the above result may have to be accomplished by many attempts, as no operation in these weakened patients should be carried to the danger point.

The postoperative treatment in all of these cases should include proper Dakinization of the cavity and wound, to bring about sterilization, after

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EDITORIALS

MEDICAL SOCIETY DUES.

That the question of the size of dues in the medical societies is one of considerable interest is evidenced by the fact that this is one of the questions to which the Conference of Secretaries of State Medical Societies addressed itself at a meeting held in Chicago in November. It is of particular interest to us in Rhode Island, as the annual dues for membership in Rhode Island Medical Society are admittedly larger than in a number of other State societies. A careful analysis of the distribution of the ten dollars tax will, however, convince most of us that it is not beyond the needs of the organization. Annually, out of this sum, each Fellow is furnished a buffet lunch at the December and March meetings, which at a conservative estimate costs seventy-five cents each, a dinner at a cost of two dollars and a half per plate is furnished gratis every member whose dues for the current year are paid at the time of the Annual Meeting in June, and a monthly copy of the RHODE ISLAND MEDICAL JOURNAL, which contains the transactions of the State Society and all the available papers read before medical gather-

ings in the State. This amounts to five dollars, leaving the balance to be applied to the ordinary running expenses of the Society and the maintenance of one of the finest State medical library buildings in the country. Moreover, even a cursory perusal of the budget and the expenditures of the funds of the Society will demonstrate that the officers of the Society have striven earnestly and faithfully to administer the funds of the Society to the best interests of the members.

In this connection we make bold to state the belief that the failure of members to join the Rhode Island Medical Society is due less to objection to the amount of the annual tax, than to failure of the proper officers to seek their affiliation. This difficulty can be overcome by cordial co-operation between the District and State Societies.

STATE INSTITUTIONS.

Last winter a commendable effort was made by representative men and women in the State of Rhode Island to increase the efficiency of the various State Institutions. Much publicity was given to the matter of how the institutions were conducted, the relations one to each other and to the public at large. Enough interest was aroused so that a bill passed the General Assembly to the effect that a director of all the State Institutions be selected and paid a salary sufficient to secure a first class man for the task. Certain conditions were specified as to the qualifications of such a director. After the legislation was passed, this committee of citizens who were responsible for its passage, endeavored to get in touch with the Penal and Charitable Commission as to the type of man they thought would fill the position satisfactorily. This was not altogether successful because of the feeling aroused among the members of the Commission. They resented all the publicity given to the work of the State Institutions, were opposed to the law as passed and the recommendations which the citizens' committee had to offer. They ignored the intent of the law and the public sentiment which was evidently behind its enactment, and chose a man for the office who, while a respected citizen, has few qualifications for the position. By their action they challenged the people who were endeavoring to improve the conditions at the State Institutions and who had carried their program through after the fashion of gentlemen, so far as the public has any information.

The Penal and Charitable Commission has not been accused of dishonesty but has been criticized for not properly equipping and correlating the work of various State Institutions. The Commission is made up of persons who have had little or no experience in institutional management. Neither do they devote the necessary time, nor should they be expected to devote the time to details of administration even though they are qualified. The duties of all such boards should be confined to matters of policy and expenditure of money, guided by the advice of a director who does know his business. The board should hire him, leave him to work out his plans of administration, and he should be retained only so long as he makes good. It is not expected that such a director would interfere in the management of each institution. It so happens that there are two or three physicians in charge of some of these institutions who are high grade men, and as able as any in the country, but these men are given little opportunity to get things done, because they are overruled by the powers higher up, who are not qualified in any way to pass upon these suggestions. How can the State expect to get competent hospital superintendents when they must serve under such humiliating circumstances? But a good director would spend all his time meeting with the heads of the various institutions, receiving their suggestions, and bringing harmony and co-operation among all the institutions.

There are many new policies which should be introduced and a director should study constantly the work of institutions in other parts of the country and advise the introduction of those measures which would improve conditions in the institutions in this State.

The public expects that only those persons should be sent to State Institutions who cannot be cared for at home. It expects that while they are inmates, they should be treated kindly and given good care. It expects the State Hospitals to bring back to health all those who possibly can be benefited by the best known methods of treatment and returned to their homes, to be no longer a burden upon the community. It is one of the serious shortcomings of all State institutions that persons committed to their care are studied briefly, assigned to a bed and not given much attention afterwards. The fault does not so often lie with the superintendents. They are overwhelmed with the

work demanded of them and are not given enough assistants to do it well. After a time they become discouraged, careless and indifferent. The State Institutions should not be looked upon as a boarding house but a corrective agent, healing mind and body sufficiently to put back into the community as many of those committed to their care as possible, and in the least possible time. To these tasks should be added the duties of supervising in the community those who have been returned to their homes on probation, until such time as these persons are found capable of living a normal existence.

Physicians understand all these problems as few others do. Ought we not to ask of the medical profession a public statement upon this matter, after it has been given consideration by a good committee?

INSURANCE.

In these days when the insurance companies are offering the greatest varieties of protection to individuals or organizations, it is well for the physician to think seriously of his own protection and the protection of his family.

Some companies insure the fingers of a famous violinist or the feet of Charlie Chaplin. Others will protect a baseball club if the home-run king is indisposed or in a world series will insure the club from loss due to the elements. Automobiles and their owners may be protected from fire, theft or accident to themselves or to others.

The physician should be cognizant of the value and the necessity of protecting himself and his family. Every physician, as an examiner, has had occasion to reject some man because he neglected to consider insurance until the strain of modern life had forced his blood pressure above normal limits, had brought albumin or sugar in his urine, or had developed in his heart either a murmur or an irregularity.

With these cases constantly recurring, the physician should be foresighted, especially when he realizes that his income is entirely dependent on his own efforts. Too often, however, is the story told of this physician who develops some acute condition that carries him off, leaving his widow with but little resources outside of the bills, which, if he lived, would have been paid, but which, after his death, are forgotten or disputed by the one-time grateful patients.

VACATION.

The late Dr. Thompson of Indiana, a wise and witty old timer, to a younger colleague who had complained that attendance on the meetings of the A. M. A. made him unhappy because of the many topics discussed of which he was ignorant, once said, "Don't mind, Son, you probably know some things that they don't." "Yes," replied the unhappy one, "but they don't know that I know things that they don't know while I know that they know things that I don't know."

There are two things that the average medical man engrossed in his busy life and harassed by his multiplying cares does not know, or if they do they give no indication of it. The first is the value of a vacation and the second the inspiration and incentive one gains by the attendance on scientific meetings and close contact with men who are today making medical history.

There are many men in Rhode Island who are capable, efficient and brilliant and they know it, but because their light is shed over a restricted territory and their influence correspondingly lessened, the world at large does not know it.

At some future time it may be well to discuss this second phase but at present the subject of a vacation is uppermost. There are in this great country of ours certain things that every one should see before one passes on. You may be glad that you are American and not a Russian, Frenchman or Italian, but you will never know *how* glad till you have seen the glories of your own country.

Rave of the grandeur of mountains, of snow-capped peaks, and beautiful lakes of Switzerland, then see the Rockies, the Grand Canyon, the Garden of the Gods and Pike's Peak and stop raving. If you want volcanoes, go see Vesuvius, then see the wonders of the Yellowstone and its hundred manifestations of intra terrestrial energy, and Vesuvius sinks into insignificance. See the Riviera, then California; indeed, see the world and then our own country and be satisfied. We have everything in nature that they have and to spare, and we know it if they do not. Moreover, we have stable government, we have luxurious modes of travel, good hotels, proper food, freedom from custom regulations, absence of the thousand and one inconveniences attendant upon foreign travel, and granted that one needs a vacation, it follows that under existing circumstances at the present time it should be taken in our own country.

The Rhode Island Medical Journal offers to the profession an opportunity to gain profit by attendance on the next meeting of the A. M. A. in San Francisco and enjoyment of vacation and travel at a minimum of expense and discomfort. If seven doctors in the Society will take their wives or a party of fourteen can be counted on to take the trip, and this is the minimum necessary for the reduced fares. Dr. F. T. Rogers has consented to take charge of the party, make all necessary arrangements for the passage, for Pullman accommodations, meals en route, hotel reservations, excursions, and to give such a party all the conveniences of a personally conducted tour at a less price than the cost of an individual trip.

Through the Church Ticket Agency, the following itinerary has been prepared. The necessary factors are:

1. A party of fourteen.

2. A deposit of 25% of the cost, before April 15th. In case of unavoidable circumstances preventing the journey after this date, the vacancy may be filled by agreeable people, otherwise the amount is forfeited. This is necessary because of the early reservations made and expenses incurred in preparation.

3. Payment of the full amount before May 15th. When this is done your troubles cease. The cost will be $525 per person.

Is this itinerary worth it?

Sunday, June 17—Leave Providence on 7:50 A. M. train to Worcester, connecting with Pullman leaving at 11:15 A. M. over the New York Central lines. Luncheon and evening dinner in diner.

Monday, June 18—Breakfast and luncheon in diner. Arrive Chicago at 1:00 P. M. Afternoon for sightseeing. Headquarters at Hotel Sherman, where evening dinner will be provided. Leave Chicago at 8:00 P. M. over the Santa Fe route.

Tuesday, June 19—Wednesday, June 20—En route. All meals in diner.

Thursday, June 21—Arrive Grand Canyon at 8:20 A. M. All day for sightseeing. Breakfast, luncheon and evening dinner provided at El Tovar Hotel. Leave at 7:25 P. M.

Friday, June 22—Breakfast in diner. Arrive Riverside at 1:00 P. M. Luncheon at Glenwood Mission Inn. Leave Riverside at 4:25 P. M., arriving Los Angeles at 6:15 P. M. Rooms and meals provided at the Alexandria Hotel.

Saturday, June 23—In Los Angeles. Auto ride to Hollywood and the Beaches.

Sunday, June 24—In Los Angeles. Auto ride to Pasadena.

Monday, June 25—Leave Los Angeles in Pullman on 8:00 A. M. train. Luncheon and evening dinner in diner. Arrive San Francisco 10:30 P. M. Room and all meals provided at the Cecil Hotel.

Tuesday, Wednesday, Thursday and Friday—In San Francisco.

Friday, June 29—Leave San Francisco in Pullman at 6:00 P. M.

Saturday, June 30—En route. All meals in diner.

Sunday, July 1—Arrive West Yellowstone at 7:30 A. M. After breakfast take autos for the *Tour of the Yellowstone National Park*. Arrive Old Faithful Inn at noon. Room and meals provided for a stay of twenty-four hours.

Monday, July 2—Leave Old Faithful Inn at 2:00 P. M. and arrive Yellowstone Lake at 5:00 P. M. Room and meals provided at the Lake Hotel.

Tuesday, July 3—Leave Yellowstone Lake at 10:00 A. M., arriving at the Grand Canyon of the Yellowstone at noon. Room and meals provided at the Canyon Hotel for a stay of twenty-four hours.

Wednesday, July 4—Leave Canyon Hotel at 1:15 P. M., via Dunraven Pass and Tower Falls, arriving Mammoth Hot Springs at 5:00 P. M. Room and meals provided at Mammoth Hotel.

Thursday, July 5—Leave Mammoth Hotel at 1:30 P. M., via Norris Geyser Basin and Gibbon Canyon, arriving West Yellowstone at 5:00 P. M. After supper at restaurant leave in Pullman at 7:30 P. M.

Friday, July 6—Arrive Salt Lake City at 7:00 A. M. Headquarters at Hotel Utah, where breakfast and luncheon will be provided. Leave Salt Lake City at 4:45 P. M. over the picturesque Denver & Rio Grande R. R. Evening dinner in diner.

Saturday, July 7—En route through the mountains of Colorado. All meals in diner. Pass through the Grand Canyon of the Arkansas and the Royal Gorge early in the afternoon. Arrive

Colorado Springs at 5:30 P. M. Rooms and all meals provided at the Antlers Hotel.

Sunday, July 8—At Colorado Springs. Auto trip included to Garden of the Gods, Williams' Canyon, Manitou Springs, Cheyenne Canyon, Broadmoor, etc. In the afternoon trip included by auto to the summit of Pike's Peak.

Monday, July 9—Leave Colorado Springs at 7:25 A. M., arriving Denver at 10:00 A. M. Headquarters at Brown Palace Hotel, where luncheon and evening dinner are provided. Leave Denver at 10:00 P. M.

Tuesday, July 10—En route. All meals in diner.

Wednesday, July 11—Arrive Chicago at 7:30 A. M. Breakfast provided. Leave at 9:00 A. M. Luncheon and evening dinner in diner.

Thursday, July 12—Breakfast and luncheon in diner, arrive Providence at 1:48 P. M.

All hotel reservations, where possible, will include room with private bath.

Information regarding the trip may be obtained of Dr. Rogers, Dr. J. W. Leech or of the Church Ticket Agency; and the February issue of the JOURNAL will contain a fuller description of the places of interest to be visited. If the required number will sign up before April 15, the deal is complete, if not it is cancelled.

(*Concluded from page 8*)

which there will be no difficulty in securing permanent healing. Proper Dakinization, I believe, hastens and makes more secure the result, but the lack of it does not necessarily negative the result desired. Most of these cases in the absence of it will go on to final closure. Postoperative treatment should also include proper dietary and hygienic measures and anti-tubercular and anti-lentic treatment for those cases presenting those constitutional conditions. Above all, I believe cases of chronic empyema should be kept in the hospital under constant observation and control and should never be turned adrift until their condition is satisfactory. In this way only can we obtain the results that we desire.

CASE REPORT

DERMATITIS MEDICAMENTOSA (MERCURY).

HARMON P. B. JORDAN, M.D.
CITY HOSPITAL.

M. W.—Male, age 21 years, laborer, admitted November 10, 1922, for pustular eruption, of two days' duration. Temperature 101, pulse 124, respiration 28, markedly prostrated. Pustular eruption covering the body excepting the face, back and posterior aspect of lower extremities and feet. The chest, arms, legs and abdomen being entirely covered with a confluent pustular eruption, the eruption on the penis, scrotum, groins and axillæ being of the bullous type. The patient gave the following history: On Monday, November 7th, found himself afflicted with pediculosis pubis. A friend (?) advised him to try blue ointment, which he did on evening of November 8th. He applied it freely to chest, abdomen, groin axillæ and penis, and less freely to lower extremities, rubbing briskly for a few minutes. During the night had a burning sensation over whole body with increase in itching. On arising in morning noticed an eruption on body which was sore to touch. This got steadily worse, becoming unbearable by the 10th, when he called in his family physician. On the 11th patient was extremely prostrated and placed on dangerous list. Remained in this condition for eight days, temperature from 97 to 104, septic character. Improvement began about the 10th day in hospital. Recovery was accompanied by profuse desquamation confined to the areas of inflammation. Discharged well on the twenty-sixth day. The patient at no time showed any of the ordinary symptoms of mercurial poisoning.

SOCIETIES

PROVIDENCE MEDICAL ASSOCIATION.

The monthly meeting was held Monday, December 4, 1922, at the Rhode Island Medical Society Library, Francis Street, at 8:45 P. M.

Program: "The Providence Mosquito," Prof. F. P. Gorham; "The Schick Test and Toxin Anti-Toxin Immunization for Diphtheria," Dr. H. J. Connor; Travel Talk, Dr. J. F. Hawkins.

In accordance with Article 1, Section 6, of the By-Laws, the Standing Committee presented the following nominations for officers and committees for the year 1923: For President—William B. Cutts, M.D.; for Vice-President—George W. VanBenschoten, M.D.; for Secretary—Peter Pineo Chase, M.D.; for Treasurer—Charles T. Deacon, M.D.

For member of the Standing Committee for five years—N. Darrell Harvey, M.D.

For Trustee of the Rhode Island Medical Library for one year—P. Williams, M.D.

For Reading Room Committee: George S. Matthews, M.D., Elihu Wing, M.D., Herman C. Pitts, M.D.

For Delegates to the House of Delegates of Rhode Island Medical Society: C. A. McDonald, M.D., J. P. Cooney, M.D., G. A. Matteson, M.D., J. E. Donley, M.D., J. B. Ferguson, M.D., Herbert E. Harris, M.D., Bertram H. Buxton, M.D., Peter P. Chase, M.D., Ira H. Noyes, M.D., Prescott H. Hill, M.D., Wm. P. Buffum, Jr., M.D., Geo. R. Barden, M.D., H. G. Partridge, M.D., Arthur H. Ruggles, M. D., Alex. M. Burgess, M.D., F. V. Hussey, M.D.

Councillor for two years—Arthur Hollingworth, M.D.

The Standing Committee have approved the following applications for membership: Dr. Florence M. Ross, Dr. William A. Horan.

Special collation followed.

PETER PINEO CHASE, M.D., *Sec.*

RHODE ISLAND MEDICAL SOCIETY.

The 11th Annual Meeting of the Rhode Island Medical Society was held at the Medical Library June 1, 1922, at 4 P. M., the President, Dr. George S. Mathews, presiding.

The minutes of the Annual Meeting of the House of Delegates and of the Council, and the minutes of the March meeting were read by the Secretary and accepted.

The Trustees of the Caleb Fiske Fund, through its Secretary, Dr. Halsey DeWolf, submitted the annual report as follows: "At the Annual Meeting held May 26, 1922, the Trustees voted to award no prize for the essays submitted in competition upon the subject "Radium Therapy." A prize of $250 for the best essay upon the subject "Has Surgery Lessened the Mortality of Cancer?" is offered for 1922-23. The Trustees voted to give their annual remuneration to the Library Committee, to be expended in the binding of books or periodicals or in the purchase of new books. Financial report as follows:

1. Interest in R. I. H. Trust Co. Part. Acct. No. 25312, being the principal sum deposited under Decree in Equity 3219 of the Supreme Court.....	$10,386.72
Participation Acct. No. 17841, being the Premium Fund Acct.	465.36
2. Amt. in Prov. Institute for Savings Acct. No. 251.....	622.75
Total	$11,474.83

Of this total amount there is at the disposal of the Trustees $1,088.11. Accepted and voted to be placed on file.

The President appointed Dr. Harry L. Barnes representative of the R. I. Medical Society at the New England Conference on Tuberculosis, to be held at Poland Springs, September 28-30, inclusive.

The following program was presented: 1. "Rickets and Tetany in Infants," Dr. W. P. Buffum, Jr., Providence; 2. "Some Aspects of the Treatment of Diabetes," Dr. Alex M. Burgess, Providence; 3. "Hay Fever," Dr. Harry S. Bernton, Washington, D. C.; 4. "Bodily Mechanics in Relation to Chronic Disease," Dr. Lloyd T. Brown, Boston. The President then presented his annual address.

The President-elect, Dr. Frank E. Peckham, Providence, was then inducted into office and after a few remarks declared the meeting adjourned, to reassemble in the evening at the Turk's Head Club for the Annual Dinner, at which Dr. Jesse E. Mowry acted as anniversary chairman and addresses were made by Alonzo R. Williams, Providence, and Rev. Horace Hartley Hayes, Providence. Adjourned.

J. W. LEECH, M.D., *Secretary.*

The regular quarterly meeting of the Rhode Island Medical Society was held at the Woonsocket Hospital, Woonsocket, R. I., the Society being the guest of the Woonsocket District Medical Society.

The morning was devoted to clinics and demonstrations by the members of the staff of the Woonsocket Hospital, covering a wide range of sub-

jects, including operations of tonsilectomy, cataract, discission, appendectomy, hysterectomy, repair of hernia and fractures.

At 1 P. M. luncheon was served in the nurses' dining room, after which the Society gathered in the Hospital grove for the literary program at 2:40 P. M., Dr. Peckham, the President, in the chair.

Announcement of the deaths of the following Fellows was made by the Chair: Frank E. Jenckes, E. P. Stimson, J. H. Miller, Geo. H. Simpson.

The reading of the minutes of the preceding meeting was omitted by unanimous vote.

Dr. Peckham then invited Second Vice-President Dr. Wm. E. Barry, Woonsocket, to the chair and turned the meeting over to Dr. Barry as chairman.

The first paper, on "Observations on Cancer of the Uterus," was read by Dr. Lincoln Davis, Boston, and was discussed by Drs. Keefe, Jones, Gerber, Barnes and Hardman.

The second paper, "Reminiscences of a Woonsocket Surgeon for 36 Years," by Dr. John J. Baxter, was a delightful and interesting picture of a long career.

On motion of Dr. Hawes, duly seconded, a rising vote of thanks was extended to the Woonsocket District Medical Society and the Woonsocket Hospital for the opportunity afforded this Society to hold its meeting as their guest. Adjourned.

J. W. Leech, M.D., *Secretary.*

House of Delegates.

The meeting was called to order at 5 P. M., November 21st, 1922, at the Medical Library, the President, Dr. F. E. Peckham, presiding.

The Secretary reported that in accordance with the By-Laws the following members have been dropped for non-payment of dues as of date October 26, 1922: H. V. Carroll, Newport, R. I.; A. P. Fishman, Providence, R. I.; B. H. Gilbert, Conimicut, R. I.; W. A. Mulvey, Providence, R. I.

The Treasurer's budget as recommended by the Council was, on motion, duly seconded, approved.

Dr. F. N. Brown, Chairman of Committee on Traffic Preferences for Physicians, reported correspondence with other cities and organizations.

Dr. F. T. Fulton, Chairman of Committee on Legislation, State and National, reported as requested at the May meeting of the House of Delegates, upon steps taken by the State Board of Health in regard to chiropractors, that the Secretary of the State Board of Health had action against one chiropractor and had obtained a conviction in the District Court, from which an appeal had been taken by the defendant chiropractor. The case has rested in the Superior Court for three years. The Secretary pointed out the difficulty of getting co-operation of the State legal officers in the matter.

After several years of faithful service to the Society as Treasurer, interrupted only by army service, Dr. W. A. Risk presented his resignation, owing to his removal to Washington, D. C. On motion of Dr. Brown, seconded by Dr. Welch, Dr. Jesse E. Mowry, Providence, was elected Treasurer of the R. I. Medical Society, beginning January 1st, 1923.

Dr. Welch moved that the dues for 1923 be fixed at $10.00. Seconded by Dr. Champlin. It was so voted.

The President presented a proposition from Dr. J. W. Bartol, President Massachusetts Medical Society, to have a committee from all the New England State Medical Societies confer as to the advisability of conjoint meetings of the Medical Societies of the New England States. It was moved by Dr. Leech, seconded by Dr. Jones, that the President appoint such a committee, of which he should be a member ex-officio. The President thereupon appointed Dr. A. T. Jones and Dr. Alex M. Burgess to act with the President ex-officio as such a committee. Adjourned.

J. W. Leech, M.D., *Secretary.*

Council.

The Council was called to order at 4:30 P. M., November 21st, 1922, in the Medical Library, with Dr. Peckham, the President, in the chair.

The Treasurer's Budget for the year 1923 was presented by the Secretary in the absence of the Treasurer, as follows:

Secretary Expenses (Sec. hire and stenography)	$90.00
Printing and Postage	100.00
Gas	50.00
Electricity	50.00
Fuel	525.00
Collations	500.00

Librarian	1,404.00
Books and Journals (including Ely Fund $74.00)	150.00
Janitor	480.00
Safe Deposit	6.00
City Water	15.00
Telephone	75.00
House Supplies	75.00
House Repairs	150.00
Rhode Island Medical Journal	380.00
	$4,050.00

It was voted that the Council recommend that the House of Delegates approve the budget as printed above.

It was moved by Dr. Hammond, seconded by Dr. Champlin, that the Society purchase the stereopticon lantern now in use in the Medical Library. It was so voted.

Dr. Welch called attention to the desirability of replacing the Printing Fund, from which a loan was made to the Society for the erection of the Library and moved that $500.00 be transferred from the funds of the Society to the Printing Fund. Seconded by Dr. White. It was so voted. Adjourned.

J. W. Leech, M.D., *Secretary.*

Quarterly Meeting.

The regular quarterly meeting was called to order in the Medical Library at 4:15 P. M., December 7, 1922, by the President, Dr. F. E. Peckham.

The minutes of the September meeting of the Society and of the November meetings of the Council and House of Delegates were read by the Secretary and approved.

A letter from the Managing Editor of the *United League News*, the organ of the United League of Women Voters of Rhode Island, asking the co-operation of the Society with the League's program for mother and infant welfare, was read by the Secretary.

Mr. Edward Aborn Greene, Esq., in a short address portraying incidents in the life of Dr. Joseph Mauran, presented a portrait of Dr. Mauran, a former President of this Society. On behalf of the Society, Dr. Wm. R. White accepted the portrait, making a plea for further gifts of a similar nature to enlarge the collection of portraits of Fellows now possessed by the Society.

The President made the following appointments:

Delegates to Medical Societies—1. Maine, Dr. Albert H. Miller, Dr. Henry A. Jones; 2. New Hampshire, Dr. Alex M. Burgess, Dr. Clinton S. Westcott; 3. Vermont, Dr. Prescott T. Hill, Dr. Charles F. Sweet; 4. Massachusetts, Dr. Bernard L. Towle, Dr. Allen A. Weeden; 5. Connecticut, Dr. John L. May, Dr. Norman McLeod.

Member-at-Large of Board of Trustees of Rhode Island Medical Society Library Building—Dr. Julian A. Chase.

The following papers were presented:

1. "Tuberculosis of the Upper Air Passages," with lantern demonstration, Dr. Lewis B. Porter, Providence. Discussed by Drs. Leech, White, Hawkins, Adams.

2. "Tubercular Manifestations on the Eye," Dr. Geo. W. VanBenschoten, Providence. Discussed by Drs. Leech and Harvey.

3. "The Question of Chronic Empyema and Its Treatment," Dr. Frederick V. Hussey, Providence. Discussed by Dr. C. O. Cooke.

After adjournment, collation was served.

J. W. Leech, M.D., *Secretary.*

Woonsocket District Medical Society.

The following is a report of the Woonsocket District Medical Society held October 19, 1922, at the St. James Hotel:

Dr. Weeden, President, in chair; Dr. Myers, Secretary pro tem. After the regular business had been transacted a very interesting paper on "Pain in the Upper Abdomen" was read by Dr. Daniel Fiske Jones, of Boston.

Edward L. Myers, M.D., *Sec. Pro Tem.*

HOSPITALS

St. Joseph's Hospital.

The Corporation of St. Joseph's Hospital invited the physicians of Rhode Island to a Cancer Clinic held at the Hospital, under the auspices of the R. I. Committee of the American Society for the Control of Cancer, Thursday, November 16, 1922, at 10:30 A. M. The clinic was well attended and luncheon was served.

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ORIGINAL ARTICLES

POST-OPERATIVE LUNG SEQUELAE.*

BY

DR. JAY PERKINS

PROVIDENCE, R. I.

Post operative pneumonia and abscesses are usually from inhalation. Whether we get pneumonia or an abscess depends upon the germs inhaled. The anesthetic is not particularly irritating to the bronchial mucous membrane and pneumonia is far less likely to develop from bacteria already in the lung than from those inhaled during the anesthesia for the operation. The form of pneumonia depends upon the kind and number of germs inhaled and the resistance of the lung. All forms from a slight bronchial pneumonia to absolute consolidation and abscess formation occur. The material inhaled may be simply mucus from the throat, it may be secretion from the nose or its accessory sinuses, it may be material regurgitated from the stomach or, in case of operations about the mouth and nose, pus or tissue from the field of the operation. Lung inflammation following tonsil operation usually becomes an abscess almost as soon as the pneumonia occurs. If there is mucus containing pus germs a transitory broncho-pneumonia results. If there is some more concentrate secretion or material containing more germs we get a more violent infection and more marked reaction on the part of the lung. The part most commonly affected is the right lower lobe, but any lobe may be affected and there may be multiple infection. The extent of the disease, at least at first, depends upon the number of bronchial tubes invaded. The intensity depends upon the number and virulence of the bacteria and the resistance of the individual, as in other infections. And the same is true of the course of the infection. Abscesses most commonly result from tonsil and adenoid operation. There has been considerable controversy as to whether the infection comes from inhalation or through the circulation. The weight of the evidence is that it comes by inhalation and that the inflammation culminates in an abscess because there is a mass of bacteria inhaled in pus from the tonsils instead of mucus containing bacteria as in ordinary post-operative pneumonia. The tonsils frequently contain many virulent organisms. Examinations with a bronchoscope show that the bronchial tubes have the mucous membrane much swollen and turgid. This swelling of the membrane closes the tube. In fact it is more than a swelling of the mucous membrane—a mass of granulation tissue forms completely closing the tube.

This tissue bleeds very easily and is the source of the blood frequently expectorated, especially where the abscess, as frequently happens, opens spontaneously into the tubes. I have seen two patients who had sufficient bleeding from this source to lead to fear of tuberculosis. The abscess cavity is much smaller than the amount of lung tissue involved, as there is an extensive area of consolidation, due to infiltration and congestion, about the true abscess. The symptoms usually begin about three to seven days after the operation and the diagnosis is usually easy especially after one has seen a few of them. Many of these abscesses open spontaneously into the tubes and make a slow recovery. Especially is this true if the abscess is in an upper lobe. In the lower lobe the drainage is poorer. The X-ray is a great help in locating such abscesses for operations, but unless they reach the surface of the lung, they are frequently hard to reach surgically though many of them can be cured only by surgical intervention. My ardor for operations has not been so great since I saw one of the best surgeons, in this line of work, in the country operate on a case of mine. Unless the inflammation has reached the surface of the lung and given pleural adhesions it must be a two-stage operation. In this case the first stage did not give sufficient adhesions to prevent some air getting into the pleural cavity and collapsing the lung. At the next operation he could not find the abscess in the spongy mass he had to suture. Later he did find an abscess which was drained but the patient did not recover. After death he was found to have mul-

*Discussion in Symposium before the Providence Medical Association, November 6, 1922.

tiple abscesses. If the abscess has reached the chest wall the operation is a comparatively simple one, but otherwise it is a difficult one for the surgeon and much more than difficult for the patient. It is best to give nature a chance before resorting to surgical measures, but if signs of marked sepsis continue, operation should be tried before the other organs of the body become degenerated by the toxaemia. As an experience taught me not to be in too much of a hurry in advising operations, so has another experience taught me that operations should not be delayed too long. I saw this man as a hospital patient and made a diagnosis of pulmonary abscess. He was afterwards seen by two surgeons, one of whom said he could not be operated upon and the other said he had tuberculosis.

He was afterwards under my care at the Hillsgrove Hospital for about two years and I watched him gradually fail and finally die of sepsis with never, to me, any indication of tuberculosis. This was a number of years ago and I do not believe that such a mistake would be made to day. The lesson is, however, just as valuable today as it was then. Another post-operative lung condition I have seen is embolism. If the embolus is sufficiently large, death takes place at once. The cases which come under the observation of the physicians are those in which a branch of the bronchial artery is included. We have a cone shaped section of the lung deprived of its circulation until collateral circulation can be established. Such an infarct has its base at the periphery of the lung and unlike infarct from heart disease is usually single. If the embolus is septic an abscess may result, but following operations the embolus is not usually septic and spontaneous recovery takes place. A sharp pain in the side with solid lung sharply circumscribed following operation should always cause a suspicion of embolism. There may be great pain but usually little fever and differing from cases of embolism in heart disease the resistance of the patient is usually good. If the area involved is not too great the outcome is usually favorable.

POST-OPERATIVE PULMONARY COMPLICATIONS.*†

Charles O. Cooke, A.M., M.D., and
Wilfred Pickles, M.D.
Providence, R. I.

As we believe that pulmonary complications following operation are an important factor in the length of convalescence and even in the mortality of surgical procedures, the following study of one thousand operative cases on the surgical services of the Rhode Island Hospital is reported. The series includes patients operated upon from January 1, 1920, to November 15, 1920, and includes all operative cases receiving any kind of anesthesia, with the exclusion of patients with primary pulmonary conditions or penetrating wounds of the chest. Aside from this, no selection has been made. As gynecological, orthopedic and laryngological cases are, in this hospital, cared for by special services, the series includes only general surgical cases operated upon by the various staff surgeons during their periods of service.

Thirty-nine patients developed some form of post-operative pulmonary complication which could be determined from the record. It is probable that the actual occurrence of the minor complications, at least, is somewhat larger than this figure would indicate, as conditions of this nature can easily escape observation unless especially sought during operative convalescence. On the whole, however, we feel that all complications of importance are covered by this study. The occurrence of the various types of pulmonary involvement is shown in Table 1, and we shall discuss briefly each condition there mentioned.

Table 1.

Complication.	No. cases.	Morbidity %	Deaths.	Mortality % of Morbidity.	Mortality % of Total.
Bronchitis	14	1.4	0	0	0
Bronchopneumonia	11	1.1	3	27.3	0.3
Lobar pneumonia	5	0.5	3	60.0	0.3
Infarction of lung	4	0.4	1	25.0	0.1
Lung abscess	2	0.2	1	50.0	0.1
Hypostatic pneumonia.	2	0.2	1	50.0	0.1
Pulmonary embolism.	1	0.1	0	0	0
Totals	39	3.9	9	23.0	0.9

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*Read before the Providence Medical Association, November 6, 1922.

†From the Surgical Services of the Rhode Island Hospital.

Bronchitis.

Fourteen, or slightly over one third of the patients showing pulmonary involvement, developed bronchitis. This condition, marked by cough, slight rise in temperature and respiration, and a few rales, usually about the bases, came on the first day post-operative, as a rule, and cleared in three or four days. In a few instances it developed as late as seven days after operation, but in no case did it lead to a fatal termination. As shown in Table 2, bronchitis is the most common complication in patients operated upon for gall-bladder pathology or inguinal hernia. Of the fourteen cases, eight developed in patients with clean operative fields, five in patients with septic fields, and one where the nature of the field was questionable. (See Table 3.)

Bronchopneumonia.

Eleven patients developed bronchopneumonia following operation, six having septic operative fields and five having non-septic conditions when operated upon. Most of the cases showed signs of bronchopneumonia on the second or third day after operation, recovering gradually in the course of six or seven days. In three instances, however, this complication led to the death of the patient, the mortality being thus 27.3 per cent of cases so affected. In all of the fatal cases the operative field was septic: in one, a gangrenous appendix; in the second, a septic fracture of the femur; and in the third, a gas-bacillus infection of the arm. This complication seems to occur most frequently in operations upon the appendix.

Lobar Pneumonia.

This, the most serious of all the complications studied, occurred in five patients in this series, three of these being operated upon for acute appendicitis. This complication became evident, as a rule, on the second or third day after operation and, in the favorable cases, showed marked improvement in from seven to nine days. Three of the cases, however, resulted in death, the mortality of this complication being thus sixty per cent. Here, again, all the patients dying had septic conditions before operation: in two instances, acute appendicitis; and in the other, an infected, gangrenous toe.

Infarction of Lung.

Cutler and Hunt,[3] in their comprehensive article on this general subject, describe a post-operative condition in which pulmonary infarction, usually of a moderate degree, can be shown by early x-ray studies. The clinical evidence in these consists of sudden pain on respiration following a rise in pulse, temperature and respiration, associated with expectoration in about one half of the cases. The sputum may be blood-tinged. Auscultation shows one or more small areas of fine rales, and, if the infarction be near enough to the pleura, a friction rub. The acute onset and the complete disappearance of signs and symptoms in six or seven days are characteristic.

Four cases were recognized in this series, the operative field being non-septic in all instances. All showed pleural pain and friction rubs, and three of the cases cleared spontaneously in from four to fourteen days, with no recorded sequelae. The fatal outcome in the fourth case, a typical infarction, should be attributed not to the pulmonary condition but to an associated head injury, probably skull fracture.

We are under the impression that x-ray studies, made immediately after the development of all lung complications, would cause us to place more properly in this group many of the cases which we have regarded as bronchitis or bronchopneumonia.

Lung Abscess.

Two patients developed lung abscesses following operation. The first had a gastro-enterostomy performed for the relief of a duodenal ulcer. On the fourth day after operation he developed a productive cough, with sputum which rapidly became foul. On the sixteenth day x-ray showed evidence of lung abscess, death occurring on the following day. Post-mortem examination confirmed the presence of abscess or gangrene of the lung. The second patient had appendectomy with drainage. About three weeks after operation the patient began to cough and to raise sputum, which gradually became more profuse and foul, the appendiceal sinus continuing to drain. This condition persisted, and six months after operation multiple small abscesses were demonstrated at both bases by x-ray. The appendiceal sinus was closed at this time, but the pulmonary condition remained unchanged. The progress of the patient since the second operation is not known.

Hypostatic Pneumonia.

In going through the hospital records in the preparation of this series, several cases of hypo-

static pneumonia occurring in patients having no operation or anesthetic were encountered, and such instances are not unusual. In the sense of their being due either to operative procedure or the administration of an anesthetic, therefore, these cases should probably not be included in a discussion of this character. But as such conditions do occur following operation and constitute a definite post-operative risk, we have considered them here. Two patients in this series developed this complication following prostatectomy: one under local anesthesia, with subsequent recovery; the other under ether, with a fatal termination.

Pulmonary Embolism.

The more severe form of pulmonary infarction, recognizable clinically as embolism, occurred in one patient of those considered. In this case, supra-vaginal hysterectomy was performed, the patient having two typical acute attacks on the thirteenth day after operation. The patient recovered, all signs disappearing in the course of seven days.

Of interest in this connection, although not directly relevant to this discussion, are two non-operative cases of embolism encountered in preparing this paper. The first is that of a woman of sixty-six with a fracture of the femur, the fragments being immobilized without anesthesia. The patient died from pulmonary embolism four days later. The second is that of a girl with phlebitis of the femoral vein, with an uneventful course until, on being allowed to leave her bed, she dropped dead from embolism of the lung.

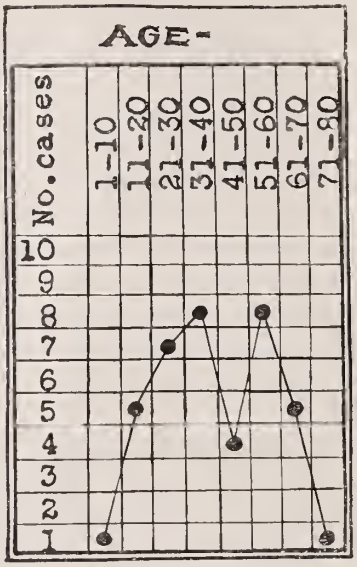
The occurrence of these complications in relation to age is shown by decades in Figure 1. The majority of these conditions occur in middle adult life, the probable reason being the greater number of operations performed on patients in this period. In fact, of the complications considered, the only one having any constant relation to age is hypostatic pneumonia, this coming consistently in patients of about sixty years or over.

Table 2 shows the relation of the various complications to the field of operation, the last column giving the percentage occurrence of such pulmonary conditions in all the operations performed in a given region. Thirty-one of the cases occurred in patients undergoing laparotomy, while only eight are found in patients whose abdomens were not

Relation to Other Factors.

Figure 1.

Relation of Complications to Age.



opened, although the number of patients in each of these groups is approximately the same.

Table 2.

Relation of Operative Field to Complications.

Region.	Bronchitis.	Bronchopneumonia	Lobar pneumonia.	Infarction.	Lung abscess.	Hypostatic pneumonia.	Embolism.	Totals	% of complications in region.
Breast	..	1	..	..	..	..	..	1	5
Upper abdomen—									
Stomach	1	..	..	..	1	..	..	2	13.3
Gall bladder	3	..	..	..	..	..	..	3	9.3
Lower abdomen—									
Appendix	1	4	3	..	1	..	..	9	4.5
Inguinal hernia	6	..	1	1	..	..	..	8	5.5
Bladder and prostate	1	1	..	1	..	2	..	5	17.4
Pelvis	..	..	..	..	..	..	1	1	10.0
Kidney	1	..	..	..	..	..	..	1	7.6
Ventral hernia	1	2	..	..	..	..	..	3	21.4
Rectum and anus hemorrhoids	..	..	..	..	1	..	..	1	1.6
Extremities	..	3	1	1	..	..	..	5	2.5

As an overwhelming majority of operative cases in this hospital receives ether as an anesthetic, it is not surprising to find thirty-six of these pulmonary complications following ether anesthesia. In all these cases the ether was administered by the internes on service with an open cone or funnel as described by Miller.[6] The average amount used in

the entire series was 10.5 fluid ounces per hour. It is of interest to compare this amount with the average used in a series of 2000 administrations by an expert anesthetist using the same method, where Miller[6] found the average amount for the first hour to be 9.64 fluid ounces, and for the second hour, 4.0 fluid ounces. As would be expected, the hospital series shows a considerably larger average amount. In the cases developing pulmonary complications, the average amount was found to be 12.1 fluid ounces per hour. In addition to these cases with ether anesthesia, one patient in our series developed hypostatic pneumonia following an operation under novocain, and one case each of bronchopneumonia and lobar pneumonia occurred after the use of nitrous oxide and oxygen.

TABLE 3.

Relation of Sepsis to Pulmonary Complications.

Complication.	Clean cases. No.	Mortality %	Septic cases. No.	Mortality %	Questionable No.	Mortality %
Bronchitis	8	0	5	0	1	0
Bronchopneumonia	5	0	6	50	0	0
Lobar pneumonia	0	0	5	60	0	0
Infarction	4	25	0	0	0	0
Lung abscess	0	0	1	0	1	100
Hypostatic pneumonia	2	50	0	0	0	0
Pulmonary embolism	1	0	0	0	0	0
Totals	20	10	17	35.2	2	50

The presence of sepsis, as has already been noted, is associated with more serious pulmonary complications, as is shown in Table 3. Here are stated the relative occurrence and mortality of these conditions in operations performed in clean fields, as compared with those undertaken in fields already septic. The mortality in the clean cases is ten per cent, while in the septic cases it is 35.2 per cent.

TABLE 4.

Clinic.	Author.	Pulmonary morbidity. No. of cases	No.	%	Pulmonary mortality. No.	%	Mortality % of morbidity.
Montreal General Hospital	Armstrong 1906	2,500	55	2.2	32	1.28	58.1
Von Eiselberg Vienna	Ranzi 1909	6,871	263	3.8	..	....	....
Combined Statistics	Von Lichtenberg, 1908	23,673	440	1.9	..	....	....
Mayo Clinic	Beckman 1910	3,657	41	1.12	9	0.24	21.0
Mayo Clinic	Beckman 1912	5,835	92	1.57	6	0.10	6.5
Mayo Clinic	Beckman 1913	6,825	87	1.27	0	0	0
Massachusetts General Hospital	Cutler and Morton 1917	3,490	65	1.86	33	0.94	50.7
Combined Statistics	McKesson 1918	39,438	..	3.03	..	1.06	....
Peter Bent Brigham Hospital	Cutler and Hunt 1920	1,562	55	3.52	11	0.7	20.0
Rhode Island Hospital	Cooke and Pickles 1920	1,000	39	3.9	9	0.9	23.0
Pittsburgh	Decker 1921	5,976	69	1.2	29	0.5	42.0
Peter Bent Brigham Hospital	Cutler and Hunt 1921	1,604	63	3.92	5	0.31	7.93

Table 4 is reproduced from the work of Cutler and Hunt,[3] with the addition of our data, to afford an opportunity for the comparison of our statistics with those of other clinics. It will be seen that our figures are fairly close to those of the Peter Bent Brigham Hospital for 1920, but vary considerably from the 1921 statistics of that clinic. This is probably due to the fact that, in the latter series, many mild cases have been included which in our series have escaped attention.

DISCUSSION.

Pulmonary complications following operation were formerly attributed entirely to the anesthetic, and the persistence of the term "ether pneumonia" shows that this opinion is still held by a considerable number. There are at present, however, two principal and conflicting views as to the mode of causation of these conditions.

The first view holds that aspiration of foreign matter from the upper respiratory tract is the chief, if not the sole, cause of these complications. Lord[5] states that "post-operative pneumonia is a form of aspiration pneumonia," and regards it as being, usually, an auto-infection from bacteria inhabiting the patient's mouth. He considers local inflammatory conditions of the upper respiratory tract, such as coryza, tonsillitis, pharyngitis, laryngitis, and bronchitis as constituting the most important predisposing factor. The irritant action of anesthetic gases, particularly ether; inhibition of the normal respiratory excursion by the abdominal incision; and a debilitated condition as a result of sepsis and cachexia are, in his opinion, accessory factors in this matter. In a study of one hundred cases of lung abscess,[4] he finds twenty-five following surgical procedures under a general anesthetic on the upper portions of the respiratory tract. He explains these on the basis of inhalation of infected blood or other material during or after the

operation, with septic pneumonia resulting in lung abscess. Thrombosis about the site of the operative field, with resulting pulmonary embolism, seems to him to be much less plausible.

The second view can best be presented by quoting from the conclusions of Cutler and Hunt[3] in the article referred to previously: "Post-operative pulmonary complications are due in the majority of cases to embolism from the operative field. The result is pulmonary infarction or fatal pulmonary embolism. The latter is a rapidly fatal, well recognized clinical picture. The former is caused by the transmission to the lung of a small thrombus or many thrombi with resultant characteristic clinical picture." This picture has already been stated above. "The causes of infarction are (1) trauma; (2) the mobility of the part; (3) sepsis. The prognosis in this group is excellent." These writers consider that a small percentage of the bronchitis and pneumonia cases may be due to aspiration, but the importance of this factor is not held to be great, and they believe that "anesthetists and anesthesia should not bear the blame for these complications." They further state that "a reduction in the number of cases that result in these complications can be had by (1) a reduction in trauma at operation; (2) accurate hemostasis; (3) the careful control of sepsis and (4) the use of great caution in operating upon patients who have demonstrable pulmonary disease."

Our experience in studying the cases comprising this series leads us to agree almost entirely with the opinion last quoted. The only cases which it seems to us proper to attribute to the anesthetic are those of bronchitis, where it seems reasonable to consider the irritant action of the anesthetic gas as the causal factor. In all the other cases embolism from the site of operation seems the best explanation. Table 3 appears to strongly uphold this view. It will be there seen that the occurrence of pulmonary complications bears no particular relation to the presence or absence of sepsis in the operative field, but the mortality in the septic cases is three and one half times as great as in the clean cases. If we consider these pulmonary conditions due to inhalation, it is difficult to understand this great difference; but if they be considered the result of emboli set free by the operation, we should expect more serious results from septic than from aseptic particles, and this agrees with our findings.

TABLE 5.

Operations Covered in Series.

Extremities	236	Pelvis	10
Appendix	196	Varicocele	9
Inguinal hernia	144	Cranium	9
Rectum and anus	61	Bones (not counted elsewhere)	9
Skin	44	Femoral hernia	7
External genitalia	37	Jaw	7
Gall bladder	37	Scalp	7
Bladder and prostate	29	Thyroid	4
Abscesses (lymph nodes, etc.)	26	Pilonidal sinus	3
Intestines and mesentery	24	Pancreas	3
Breast	20	Spine	2
Stomach	15	Retroperitoneal sarcoma	2
Mouth and nose	14	Tuberculous peritonitis	2
Ventral hernia	14	Liver	2
Kidney	13	Peritoneal endothelioma	1
Urethra and perineum	11	Gasserian ganglion	1
		Esophagus	1

Table 5 is presented in order to give a general idea of the character of the operative cases covered in this series.

SUMMARY.

A series of 1000 operative cases under some form of anesthesia is presented, showing thirty-nine cases of pulmonary complications and a mortality from these conditions of 0.9 per cent. The complications are regarded as being, in the great majority of cases, due to pulmonary embolism or infarction, the severity of the resulting lung condition being largely dependent upon the presence of sepsis in the operative field and consequently in any embolus from that source. Prevention of such complications should be attempted by careful hemostasis and gentle handling of all tissues at operation, and by operating through healthy tissues rather than in a septic field wherever such a course is possible. To prevent the smaller number of cases, chiefly occurring in operations about the upper respiratory passages, due to aspiration, careful suction and the avoidance of operation in the presence of upper respiratory infection should be praticed.

BIBLIOGRAPHY.

[1]Cutler, E. C. and Morton, J. J. Surg., Gynec., & Obstet., 1917, 25, 621.

[2]Cutler, E. C. and Hunt, A. M. Arch. Surg., 1920, 1, 114.

[3]Cutler, E. C. and Hunt, A. M. Arch. Int. Med., 1922, 29, 449.

[4]Lord, F. T. Reprint from Jour. of Maine Med. Ass., December, 1921.

[5]Lord, F. T. Nelson L. L. Medicine, Vol. 1, 296.

[6]Miller, A. H. Jour. Am. Med. Ass., 1921, 77, 433.

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EDITORIALS

"WHAT IS SO RARE AS A DAY IN JUNE"
(IN CALIFORNIA)

With the conservatism that it has always endeavored to maintain, it may not be considered entirely germain for the JOURNAL to foster or institute extraneous enterprises; however, as the American Medical Association holds its annual meeting in California this year—June—an effort is being made to interest all that can possibly go, to undertake this excursion under the patronage of the RHODE ISLAND MEDICAL JOURNAL.

A tentative itinerary has been worked out which appeared in the January issue and is somewhat enlarged in detail in this; and the matter has been placed in experienced and competent hands. To the contemplative mind, this proposed trip offers diversified pleasure and intellectual entertainment.

At home in an easy chair, with snow or frozen ground and when dead vegetation abounds, attempt to visualize the grandeur and beauty of nature still unseen, and the result can only be a mental mirage. Independent of the advantages of attending the meeting, items of travel interest are not to be overlooked.

If we were to clothe our thoughts in novelistic language we would speak of the great cities that within a generation or two have dotted our western geography and these we may see and lucidly describe, but the intensity of the silence and solitude of the great alkali plains, one must *feel*.

Behold the cañons of Colorado, notably the Great (Grand) Cañon, and think, if possible, of how many centuries before the coming of man this mighty river was channelling its way to its present level; add to this time the unmeasured centuries gone before, when the cooling earth's surface cracked with a cataclysmic crash compared to which our most thunderous cannon would sound as the zephyr-like breath of a sleeping babe, and look with awe upon the majesty of the Rocky Mountains that were the result of this collossal break.

Turn again to the Yellowstone and revel in the beauty of its wondrous valley.

Consider the inspiring splendor of the *Yosemite and try and appreciate the exploitation of nature in this vision of extravagant magnificence.

And California; the visions of romance and tragedies of " '49" mingle with all that nature and man have made it today, probably for given area, the most bounteous and productive region in the world—the garden spot of America.

To see, even in part, these places of interest is to realize as never before that we live in an age that is both generous and beautiful.

The JOURNAL would welcome inquiries concerning this excursion and through the proper authorities give all information desired.

COUÉISM.

In spite of the complicated and costly machinery of what we are pleased to call modern progress, our poor human nature seems to remain about the same as ever. We still preserve our taste for magic, miracles and the occult. Tucked away in even the most skeptical of us there is an incurable mystic and on occasion we are all seduced by the allurements of magic. Where, for instance, is the wise physician who has not hoped largely to increase his fortune by investing his earnings in that magical mine or oil well somewhere among the Isles of the Blest? Where is the old man who does not long to retard, by the subtle magic of potion or pill or transplanted gland, his inevitable descent into oblivion? And what moneys will he not pay for exemption from the common lot of his fellows! Is there a woman of accumulating summers who in her heart can altogether resist the lure of powder and rouge which do but make, by contrast, the years more visible? How many times, do you think, in the safe seclusion of her chamber has she decked herself in such artificial raiment only to remove it before going abroad, lest such obvious striving for youth should provoke comment? How many mothers and fathers (and physicians, too) are being imposed upon by that beautiful word "vitamine," which comes so trippingly to the tongue nowadays and which means—well, who can say what it means? And again, who that is sick is so poor in faith as not to turn a willing ear to the siren voice of a healer who promises them health and the surcease of pain by the simple repetition of a magic formula? Old age we would avoid—the *tristis senectus* of which Vergil wrote so feelingly—and ill health we would banish by every means within our power. To be human is to be mystical: hence the opportunity and the success of M. Coué.

When one stops to think how young is scientific medicine and how hard its fight for adoption even within the household of the physicians, it is not surprising that the populace still cling to their old traditions. We deceive ourselves if we believe that the medicine of the bio-chemical laboratories has made any really effective impression on the popular mind. It would be an interesting thesis to maintain that popular medicine, in despite of the newspapers, the magazines and the books, is substantially what it was in the Greek, Roman and mediæval periods, with this accidental difference—that we have changed the settings on the stage and have supplied the actors with a new jargon. When men believed in astrology you had to consult the heavens if you would be free of your ill-health. Everyone recognized the absurdity of giving a "laxative downwards" when the moon was in the ram, bull or he-goat, for they are ruminant animals, and everything then naturally tends to return to the mouth. Decrees of town councils even forbade men to be bled or shaved

*Amer. Ind. "Valley of the Grizzly Bear"—While the Yosemite Valley is within the State of California, it has been owned by the U. S. Government since 1906.

on days marked "dangerous" in astrological almanacs.

With the advent of the Arabs the popular mind was duly impressed with the necessity of banishing disease by drugs and hence, thanks to the alchemists, Europe was drenched by a polypharmacy which has not yet completely disappeared. Think of the popularity once enjoyed by antimony, mercury, gold, pearls, ambergris, viper's flesh, bone of stag's heart, rosemary and lign-aloes. And in times nearer our own, who can forget the vogue of Bishop Berkeley's tar-water and Perkins' metallic tractors? So throughout the centuries there has been a popular medicine always appropriating to itself the stores of what passed as contemporary knowledge.

The man in the street today is not deeply interested in astrology. Perhaps he still entertains much of his old love for drugs, as witness the proprietary medicine business: but for psychology —he (and she) is strong for psychology and that, too, without any training in the use of the tools of the craft. Until a few years ago no one was supposed to know anything about psychology except that there wasn't much to know and that of no real importance. But things have changed and now everyone knows about psychology and seems to be studying it intensively. Psychology heartens the young mother who sits by her infant's crib, the while she reads a chapter about "The Psychology of the First Six Months of Life." Psychology determines what one's vocation shall be and if reports are true has succeeded in placing some square pegs in nice round holes. If you are a salesman psychology will teach you how to sell to an unwilling customer something he doesn't want. If you are a teacher, learn of psychology how to unfold the budding minds of youth, but be not disturbed that the oracles are in disagreement. Should you fall sick, psychology will succor you, for, behold, as the *cognoscenti* will explain, there is within you a wonderful reservoir called the subconscious mind, the depository of all kinds of magical powers, if only you know how to draw upon them. The old psychologists were wont to believe and to teach that the conscious mind has something to do with human life and conduct. Accordingly, they were concerned that you and I do something to build up consciously our moral fibre, our intellect and our wills. We were thought to have some freedom of choice and hence some responsibility. But that was all wrong, for the appearance of freedom was quite illusory: everything is mechanically determined in the mental just as it is in the physical world. It is the subconscious mind which attends to everything from the writing of poetry to the healing of disease. What you have to do is to train it to do its work properly. Suggestion and auto-suggestion are the implements you must use to subjugate the unruly tendencies of your subconscious mind and to restore the harmony so necessary to health. For the moment you shall have faith in Couéism, and when its popularity and hence its efficacy wanes, as surely it will, there will be a new gospel to restore you as infallibly as those which have preceded it—and failed.

As for the physicians, being men with a sense of humor, they will view good-naturedly the present popular craze and when it passes to give place to another, they will be found still engaged quietly in their ancient art of applying the sound principles of sane psychology and everything else to the healing of sick humanity.

T. B. OR NOT T. B.

There are two cardinal sins which the internist can commit when he is confronted with a patient who presents symptoms suggestive of tuberculosis of the lungs. The first is, in the absence of tubercle bacilli in the sputum, to tell the patient that he has tuberculosis; the second is to tell him that he has not tuberculosis. Both of these errors are frequently committed and the effects are often disastrous and far-reaching. To tell a patient that he has tuberculosis, when tubercle bacilli cannot be demonstrated—whatever the symptoms, signs or X-ray findings—is to court disaster, for sooner or later one of those many conditions which simulate tuberculosis will arise to confound the unwary diagnostician, to his chagrin, and inevitably he will earn a lasting ill-will from the patient on whom he has attempted to fasten a stigma, which, though founded on prejudice and misconception, still is very real in the popular mind. If he can be but satisfied with the verdict that tuberculosis is probable—even 99% probable—and that the patient should be treated as tuberculous, he is still safe, for the necessary loophole is still left through which he can crawl, if facts accumulate to render

his early opinion untenable. "Probable," or "99% probable," if necessary, is sufficiently definite to persuade any patient to accept treatment for tuberculosis. The distinction may seem to some academic, but those of us who have heard patients speak of the doctor who has wrongly judged them tuberculous and who have sensed their feeling of injury and injustice, know better. To us the patient with all the signs and symptmos of the disease, even with apical cavities demonstrable by physical examination and X-ray, but with a negative sputum, must always remain in the "probable" class—while those rare patients in which the most expert physical examination and stereoscopic plates fail to demonstrate a lesion but who nevertheless have tubercle bacilli in the sputum *have pulmonary tuberculosis.*

Turning to the second and the greater of the cardinal sins, that of telling a patient that he has not tuberculosis of the lungs, we are dealing with a mistake that can, of course, be founded only on ignorance, for to affirm anyone, however healthy he may appear, to be free from tuberculosis, requires an omniscience far from human. This gross error is, however, it must be regretfully admitted, of very common occurrence in this and other otherwise civilized communities. Our sanatoria are crowded with unfortunates in the very final states of the malady, each of whom early in the course of his disease has been solemnly assured that he did not have tuberculosis—and this at times, let us add, *sotto voice*, by those who style themselves experts in the diagnosis of the disease.

OF HOSPITALS.

The editorial management of the JOURNAL has recently endeavored to establish in the various general hospitals throughout the State a reportorial organization for the purpose of reporting medical or surgical cases of interest, promotions, changes of service and any other items of news that the profession at large would find of interest. The accomplishment has become assured in the case of the Rhode Island Hospital with a definite organization of the resident physicians with Dr. Wilfred Pickles as Reporting Secretary.

For St. Joseph's Hospital we have been fortunate in securing the services of a member of the staff, Dr. W. Louis Chapman, whose graphic pen-pictures are altogether familiar to the physicians of Rhode Island.

We confidently expect to report favorably in regard to other hospitals in later issues.

REMARKS

UPON THE PRESENTATION OF THE PICTURE OF DR. JOSEPH P. MAURAN TO THE RHODE ISLAND MEDICAL SOCIETY.

BY EDWARD ABORN GREENE.

Mr. Greene:

"This is quite a coincidence, my having this portrait just at this time, and before formally presenting it to you I think I will tell you its history as far as I know.

Last summer I had occasion to visit Newport and called upon a friend of mine one evening, and during our conversation he told me that he had come into possession of a very fine portrait of Dr. Mauran, of Providence, and brought it out and showed it to me. Upon my return to Providence I looked up Dr. Joseph P. Mauran. I found that he was quite a prominent physician, born in Rhode Island in 1796, the tenth child in his family, and was educated at Brown University and graduated from that institution in 1816. He had quite a number of distinguished classmates, among whom was Thomas P. Ives, and some of our leading citizens of that day. After studying with Dr. Crowell, who was well known, he took medical lectures at the Brown Medical School. He afterwards went to New York and graduated from the College of Physicians, and was awarded his M.D. degree in 1819. Returning to Providence, he practiced with Dr. Crowell and became very prominent. He continued his practice until 1856, when he gave it up and went to Europe, where he spent two years. Returning in 1858, he resumed his practice in a moderate degree with some of his old clients and gave it up entirely in 1866, and though his home was here, his winters were spent either in the South or in New York.

The origin of the Mauran family was rather a romantic one. The father of Dr. Mauran, Joseph Carlo, was the tenth and youngest child of his family. The family is supposed to be of Italian origin, located near Nice, on the Mediterranean shores. One day Joseph Carlo and his brother wanted to go to Sicily, and started out by boat.

After having been on the seas for some time and almost in reach of their destination, a British cruiser came in sight and they were both impressed and stopped it. They went aboard, and remained on board the ship for two years, his brother passing away during that period. Joseph Carlo, however, managed to hold on. After a while the ship came to American shores. It pulled in somewhere near Stonington, or New London, and came ashore to get a supply of fresh water. Joseph Carlo made up his mind that he was not going back on the ship; that he was going to desert it. He went inland, where he met some farmers and told them his story, and when the British came up to take him back the farmers defended him and wouldn't let them take him. He got his freedom in that way, and came to Rhode Island and settled down in Barrington and raised a large family. Dr. Mauran had ten children also, and this picture came through his youngest daughter, who was the tenth, and fell into the hands of my friend, and I have looked up the matter and found that he had been the President of this institution.

It gives me very great pleasure to present it to the Medical Society, that it may hang on the walls of the building. I give my congratulations to the Society, and to the City and State, in possessing this beautiful, large building. It gives me great pleasure, gentlemen, to present this portrait to the Society."

Dr. William R. White,

Our friend Mr. Green:

It is my pleasure and my honor to welcome you to our quarterly meeting today, and we assure you you will always be welcome to our meetings. Today, however, you are thrice welcomed, for do you not come bearing a gift?

In behalf of the officers and fellow members of the Society, I thank you most courteously and sincerely in your action in bringing this portrait to our Society. It will have an honored place on our walls and we will take care of it, and we will behold the family of Dr. Mauran, who is in great remembrance in being upon our walls. I think almost none of the fellowship of the Rhode Island Medical Society had any personal acquaintance with Dr. Mauran, as he came to Rhode Island in 1873. I came here in 1877, and have heard of Dr. Mauran many times, but never knew any details of his life, and to me it is a personal pleasure to be informed. It seems you brought us a view, a memory, a vision of the past, and I try to place in some of these seats visionary men of whom I have read; a group of men we should cherish in our memories and respect. I wish we had pictures of more of these men in our building. They are worthy of having not only their pictures but their memory retained. In this large building we have abundant wall space for more pictures and I am hoping that your action today, with your kindness and generosity and loyalty towards the friend of your ancestors, is simply a precedent, that somebody always will take it upon himself that some of his friends, some fine physician, will see to it that bye and bye we will have a collection of pictures that will be cherished.

In regard to Dr. Mauran, I have looked over, somewhat, the records in the early transactions of our Society, and I find that he was evidently a very active member of this Society. He was elected twice to the chair, which, so far as I know, has never happened, excepting in the case of Dr. King. Dr. Mauran was elected President first in 1847-1848, and again in 1850-1852 he was President of this Society. I did not read that he was ever on the Rhode Island Hospital Staff. He was a consulting physician to Butler Hospital, and was for many years attendant at Dexter Asylum.

I have been looking over the walls of this beautiful new building, which will hold the portraits of a lot of other men, and we know that it would be a pleasure to have their faces before us once more.

LETTERS TO THE EDITOR

Editor of the Rhode Island Medical Journal:

In a previous letter (September 1, 1922) I offered several suggestions as to the possibility of bringing about a change in attitude towards medical experts as manifested by judges, juries and laymen. Historically, this attitude is not a new one. The Roman law took no cognizance of the physician as an expert. And even when Greek physicians became active in Rome, as an organized body, little or no attention was given to medical experts as far as their standing in courts of law was concerned. The medical expert is largely a product of the English common law influenced greatly by the increasing complexity of modern society. The legal profession is predominantly

conservative and this conservatism is reflected in the courts. Discoveries in medicine are always considerably ahead of their application to the ordinary intelligence as shown by the average jury, consequently the legal profession is wary of the new things in medicine. It seems to me that this wariness is carried beyond reasonable limits when it refuses the assistance of the psychiatrical branch of medicine in disentangling the judicial snarls so frequent in the courts. Why is this psychiatry so inadequately appreciated by the judges and lawyers? This, I believe, can be answered by emphasizing the two factors, (1) that this disregard for expert opinions is partly due to the fact that they are at variance to each other and tend to obscure rather than enlighten the jury, due undoubtedly to (2) the introduction into medical testimony of the hypothetical question. Is there any possible way whereby an expert psychiatric opinion may be of value to the judge and jury?

In an address delivered by a leading jurist it was stated that "The processes of eliciting from medical experts answers to hypothetical questions concerning mental capacity, has come to be a highly artificial and a wholly unconvincing performance. Both juries and the courts largely ignore such evidence, seeking as a basis for their deductions evidence showing objectively capacity of a testator to attend intelligently to his current affairs. The refinements of the medical science applied as they are to facts postulated in an interminable question prepared by counsel interest them chiefly as intellectual gymnastics. They usually dismiss the learned medical disquisitions with ill-concealed amusement. . . And so this kind of evidence has become an excrescence upon our court procedure. The situation ought to be of serious moment to the medical profession, which may well consider whether its dignity and usefulness is not being impaired by the slight respect paid to views asserted to be based on established principles of medical science. The judicial method by which courts seek to determine whether a man is competent to make a will is quite different from the theoretical process of the medical expert witness. It resembles more the process which alienists themselves adopt in examining a living patient, for they rely upon concrete objective symptoms ascertained by tests which experience teaches them to apply. . . But, medical men, testifying as expert witnesses, make deductions from assumptions embodied in hypothetical questions, being asked to accept statements of lay witnesses as to symptoms which in their day to day practice they would not think of accepting without surely subjecting them to the tests referred to. It is impossible for the medical profession by theoretical expositions to change the judicial process of investigation . . . and the unfortunate condition remains that by the present system litigants are subjected to burdensome expense, and the time of the courts and juries is unduly occupied with evidence, which, in the main, is treated with scant respect."

In view of the above comments, it is evident that the hypothetical question is responsible for the variance of opinions and tends to obscure rather than enlighten the judge and jury. A closer study should be made of the character and value of medical expert testimony as well as the profitlessness of the hypothetical question and until such an attitude is taken, the bringing out of expert medical evidence may indefinitely continue to reflect discredit upon not only the physician but also medical science in general.

Frederic J. Farnell, M.D.

December 21st, 1922.

To the Editor:

I wish, as an ex-member of the Penal and Charitable Commission, to comment somewhat upon an editorial which appeared in the January issue of the Rhode Island Medical Journal. In general, the article is quite made up of the stereotyped phrases concerning the State Institutions, which seem to have become a habit in our State. A very wise and progressive institution head from a neighboring State has said that "reforms move with the speed of geologic eras" and it is probably this that makes for our stability. If the doctors of this State would follow the improvements made during the last few years and those now taking place in the housing and care of the State's wards, then I believe they would pass a very fine judgment on our advances in Rhode Island.

A large addition is being added to the State's prison, to be known as the Rhode Island Reformatory for Men, but because someone has ventured the belief that fifty years hence the cellular system will no longer be in vogue, are we at once justified

in building a large hotel to house our criminals? We are, however, unprogressive if we do not give proper sanitation, proper amount of heat, light and cubic air space.

The article states that two or three institution heads are doctors, and as I myself am the fourth, I will not venture to mention the institution I represent, for the wording leaves some doubt as to the identity of the two or three. However, it seems fair to mention that upon the salary list of State Institutions, there are nineteen physicians. Of this number, fifteen are full-time, resident men and four are non-resident, part-time workers. This list is exclusive of a considerable staff of surgical consultants who receive no salary. I will venture that 90% of the doctors in Rhode Island are unaware of the above figures.

If space permitted, I would like to dwell at length upon the healthy growth of Social Service work in the State Institutions, and of this fact I feel the same percentage of doctors is uninformed.

Recently a Providence physician remarked that he had had the pleasure of spending a half day at Cranston and that the first hand knowledge obtained had made him a firm friend of our State Hospitals instead of a severe critic basing his judgments upon hearsay.

Haven't we had about enough Utopia for the present?

A. S. Briggs, M.D.
1142 Smith St., Providence, R. I.
January 24, 1923.

IN MEMORIAM*

Lucius Fayette Clark Garvin
1841-1922.

It is well that we defer the business of the hour to render a tribute of respect to the memory of our honored associate, the oldest member of the Association, and with one exception (Dr. A. A. Mann, of Central Falls) the Senior Fellow of the Rhode Island Medical Society.

And he was the only member of the medical profession to be elected Governor of the State.

Doctor Garvin became a member of the Providence Medical Association in 1867, the same year in which he had been elected a Fellow of the Rhode Island Medical Society. (For nearly thirty years his name has been carried on the roll of the State Society as having joined in 1868. But previously to October 1, 1893, only Fellows of the Rhode Island Medical Society were eligible to membership in the Providence Medical Association and investigation shows that Dr. Garvin was elected to the State Society June 11, 1867. Dr. A. A. Mann was elected July 1, 1860.)

It does not appear that Dr. Garvin was at any time in office in either the State Society or the City Association, yet he was a frequent attendant at their meetings, contributed quite a number of papers that have been given a place in the Transactions of the Rhode Island Medical Society, and he was often a participant in the discussions and the business of the two societies.

Dr. Garvin's home was in Lonsdale through all his professional life of fifty-five years. He located in Lonsdale in 1867 and continued in active practice in that manufacturing community until the very day of his death, October 2, 1922.

On entering practice there he was well equipped for rendering good service as a physician. Accordingly he attained and maintained a good degree of success in general practice, having patients in the leading families as well as in those in more humble stations in life. He himself followed a simple manner of life. It was years before he kept a horse, and from about 1890 he used a bicycle rather than a more showy conveyance in visiting his patients.

But private practice did not engage his entire attention. He gave himself also to public service, and to the end of his life labored for the general acceptance of measures that he believed would be for the betterment of the community and the state. Heartily believing in the democratic form of government he consistently took part in the political and educational affairs of the town.

Dr. Garvin's home at first was in that part of the village of Lonsdale that is west of the Blackstone river, and was in the eastern half of the town of Smithfield (in 1871 set off as the Town of Lincoln). In 1876 he built on the other side of the river and made his home in that part of the village which is included in the Town of Cumberland, and thus it came about that, later, when he

*Presented at the meeting of the Providence Medical Association, November 6, 1922.

was elected to the State Legislature it was to represent the Town of Cumberland.

In earlier life he had been a Republican but after 1880 he allied himself with the Democratic party and in 1883 was elected to the General Assembly. He was re-elected year after year for sixteen terms in all, up to 1902, in three of which he was a member of the Senate.

In the years 1894, 1896, 1898, 1900 and 1906 he was the Democratic candidate for Congress from the Second District of Rhode Island. From 1901 to 1905 he was in each year the candidate of his party for the office of Governor of the State, and in 1902 and in 1903 he won the election and served with honor as the head of the State for the two years 1903 and 1904.

For the two year term, 1921 and 1922, he was again a State Senator, and at the time of his death he was a candidate for re-election.

He was elected to office as a Democrat, and served as a Democrat, but from the first to last Doctor Garvin was an independent rather than a partisan, a progressive rather than a reactionary in politics. He must always be remembered as one who had devoted his life to an endeavor to secure reforms, be it through amendment of the Constitution of the State or by enactment of laws, that should be especially for the benefit of the "common people"—the people at large.

He was first elected to the Assembly in a campaign for "equal rights," and advocated "Manhood Suffrage." And in 1888 an amendment to the Constitution of the State was adopted whereby equal rights in obtaining the right to vote was granted to all citizens of the State, and the discrimination against the foreign born citizen was ended. Previously to this amendment no foreign born citizen of the United States could vote in Rhode Island, at any election or on any matter unless he had become "really and truly possessed in his own right of real estate (in Rhode Island) * * * of the value of one hundred and thirty-four dollars over and above all incumbrances," but a "male native citizen" could qualify as a registry voter by paying "one dollar for schools," and as a full voter by paying a tax on personal property "valued at least one hundred and thirty-four dollars."

In 1884 he urged the passage of a ten hour bill that was adopted in the following year. In 1886 he introduced a measure providing for a Bureau of Labor Statistics which was later established. In 1891 he labored for the weekly payment bill, and in 1894 was instrumental in securing the enactment of the factory inspection law, and through all his career he advocated a thorough revision of the constitution.

From his college days he was a follower of John Stuart Mill, the English philosopher and political economist, in advocating a plan of "minority representation" in order to counteract the danger of democracies becoming tyrannical through the rule of mere majorities.

It was during his first term as a member of the General Assembly that the law concerning Medical Examiners and Coroners was enacted. The measure was presented to the legislature by vote of the Rhode Island Medical Society, and Doctor Garvin, who was the only medical member in either branch of the Assembly, may be supposed to have taken an active part in favor of its adoption. At any rate he was immediately appointed by Governor Bourn as Medical Examiner, for six years from March 1884, for District Seven, the Town of Cumberland, in Providence County, and he also served through a second term extending to 1896, when Dr. Alexander Marshall (still in office) was appointed as his successor.

But in the long list of measures for the public benefit that enlisted his support it was the one looking to the adoption of the "Single Tax" that to Dr. Garvin seemed the most important and called forth his greatest efforts. He made speeches in favor of it everywhere he could obtain a hearing. He sought time and again to have laws passed allowing separate towns or cities to adopt the "single tax" plan, but without the least success. Yet he kept on in his endeavors. He had the courage of his convictions. Having adopted the unpopular doctrine that the "single tax" was a panacea for many and great evils in the body politic, he was untiring in the patience and pertinacity with which he labored in advocacy of it, although many of his sympathizing friends felt that it would not stand the acid test of practicability.

Nevertheless we honor him for the honesty of his purpose and his self-denying devotion to a reform which he believed would be followed by many benefits to the entire community, and especially to the just ordinary people.

Dr. Garvin was born in Knoxville, East Tennessee, November 13, 1841. His father, James Garvin, Jr., A.M., born in Bethel, Vermont, in 1809, was a graduate of Amherst College in the class of 1831, for several years taught school in Massachusetts and Vermont, and in 1837 removed to East Tennessee. He was a man of great promise as an educator and from 1838 until his death in 1846 was a professor in East Tennessee College (in 1840 named Tennessee University), at Knoxville. James Garvin, *his* father, a farmer, lived in Cavendish, Vermont, and in middle life went to Indiana, where Dr. Garvin visited him as late as 1871. Dr. Garvin's mother, Sarah Ann (Gunn) Garvin, was the daughter of Dr. Luther Gunn, of Pittsfield, Mass., who died when she was but two years old.

Of the two sons of Mr. and Mrs. Garvin, the younger one was named after Prof. Lucius Fayette Clark, A.M., a graduate of Amherst in 1827, a brilliant instructor, whom Professor Garvin had induced to come to the Tennessee College in 1838, but who died in August, 1840, of "bilious fever" (typhoid?). It is impressive to note that both of these comparatively young men of 37 or 40 years died of what may be supposed to have been typhoid fever.

After the death of her husband, Mrs. Garvin made her home in Greensboro, N. C., where her sons grew up and Lucius, the younger son, fitted for college at a Friends School near Greensboro, now Guilford College. He entered Amherst College, his father's Alma Mater, in 1858; he was a member of the Δ K E fraternity and one or two literary societies there and, in 1862, was graduated with honors, having an oration at commencement. He had taught school during summer vacations and for one winter, to help in meeting college expenses. On account of the expense of so long a trip, he had not for all the four years felt able to revisit his home in North Carolina. Meantime the Southern States had seceded, and it was about the darkest period in the Civil War. He sought to enlist for the defense of the Union, but he was still a minor and it was practically impossible to obtain his parent's consent, so he taught school for the fall term and when he came of age in November he joined the 51st Massachusetts nine months' regiment and served as a private in Company E until its discharge in the summer of 1863. And this regiment had been sent to North Carolina, his foster-mother State, and took part in battles where he may have fought against his own townsmen! On its way home to be mustered out, the regiment volunteered for extra duty in repelling General Lee's invasion of Pennsylvania, and saw hard service in following the retreat of the Confederate army after the battle of Gettysburg.

On returning from the war, he taught for a term in a select school at Leverett, Mass., and then began the study of medicine as an assistant to Dr. Sylvanus Clapp, of Pawtucket, and from 1863 to 1867 was a student at Harvard Medical School, during one year of which he served as surgical interne at Boston City Hospital, and received his degree of Doctor of Medicine, Harvard, in 1867.

In that same year he settled in Lonsdale and continued there to the end of his life, as has been stated, successful in the practice of his profession and repeatedly elected to places of honor in the State.

Doctor Garvin was married twice: first in December, 1869, to Lucy Waterman Southmayd, daughter of Giles Southmayd, of Middletown, Conn., who died in 1898, and second, in April, 1907, to Sarah Emma Tomlinson, of Lonsdale, who survives with her two sons, Lucius and Lincoln Garvin, and Miss Ethel and Miss Florence Garvin, two of the three daughters by the first marriage.

While Doctor Garvin was distinguished as a politician, an office-holder and as a sincere, strenuous advocate of special principles and laws of taxation, to us and to the people among whom he lived, he came closest as a good man, a kind friend, a faithful, untiring physician, ever ready to render service, always cordial and courteous in manner, bearing his added years with wonderful strength and buoyancy of mind and body, progressive, enthusiastic, active and helpful to his last hour, a man to be admired and respected by all who knew him.

In selecting a mill village as the scene of his professional activities, Doctor Garvin was brought into daily contact with those who toil.

It may be that this was one reason for his intense and unfailing interest in social, political and economic problems.

We may not all agree with his answer to those difficult and perplexing questions, but we do know he was ever fighting for the uplift and betterment of the working classes. *Faithful physician, Conscientious legislator, Friend of the common people* —Hail! and farewell!

(Signed)

Charles H. Leonard
William R. White
Jesse E. Mowry
Committee
Providence Medical Association

SOCIETIES

Providence Medical Association

The annual meeting of the Providence Medical Association was held at the Rhode Island Medical Library, Francis Street, Monday, January 1, 1923, at 8:30 P. M., promptly, and the following program offered: Reading the records of the previous meeting. Report of the Secretary. Report of the Treasurer. Report of the Standing Committee. Report of the Reading-Room Committee. President's annual address. Election of Officers and Committees for the ensuing year. Appointment of Committees by the President. Communications. Reports of Committees. Unfinished and new business. Reading and discussion of papers. Reports of cases. Presentation of specimens.

In accordance with Article 1, Section 6, of the By-Laws, the Standing Committee presented the following nominations for officers and committees for the year 1923:

For President—William B. Cutts, M.D.; for Vice-President — George W. VanBenschoten, M.D.; for Secretary—Peter Pineo Chase, M.D.; for Treasurer—Charles T. Deacon, M.D.

For member of the Standing Committee for five years—N. Darrell Harvey, M.D.

For Trustee of the Rhode Island Medical Library for one year—P. Williams, M.D.

For Reading Room Committee—George S. Matthews, M.D., Elihu Wing, M.D., Herman C. Pitts, M.D.

For Delegates to the House of Delegates of Rhode Island Medical Society—C. A. McDonald, M.D., J. P. Cooney, M.D., G. A. Matteson, M.D., J. E. Donley, M.D., J. B. Ferguson, M.D., Herbert E. Harris, M.D., Bertram H. Buxton, M.D., Peter P. Chase, M.D., Ira H. Noyes, M.D., Prescott T. Hill, M.D., Wm. P. Buffum, Jr., M.D., Geo. R. Barden, M.D., H. G. Partridge, M.D., Arthur H. Ruggles, M.D., Alex. M. Burgess, M.D., F. V. Hussey, M.D.

Councillor for two years—Arthur Hollingworth, M.D.

All were elected by unanimous vote.

The Standing Committee approved the following application for membership: Dr. Harold Inman Gosline; his election followed.

Collation followed.

Peter Pineo Chase, M.D., *Secretary*

R. I. Ophthalmological and Otological Society.

The regular bimonthly meeting of the R. I. Ophthalmological and Otological Society was held December 14, 1922, in the R. I. Hospital staff room at 4:30 P. M.

In spite of the inclement weather the meeting was well attended, Dr. Blanchard presiding.

There were no outstanding committees to report.

It was moved and seconded that Article III of our Constitution be altered to read as follows, this change to be voted upon at the next meeting.

Article III to read: "Applicants for membership in this society shall be graduates in medicine and members of their district medical society in R. I., who shall confine their work exclusively to the practice of Ophthalmology and Otolaryngology, or both."

The members adjourned to the operating floor, where some very interesting cases were presented for observation and discussion.

Otolaryngological cases by Drs. Adams, Blanchard and McLaughlin.

Ophthalmological cases by Dr. McCabe.

A vote of thanks was extended to Dr. John M. Peters for his very generous luncheon, served to the members just prior to the finish of the meeting.

Meeting adjourned at 7:30 P. M.

Jeffrey J. Walsh, *Secretary*

Woonsocket District Medical Society.

Meeting of the Medical Society was held Thursday, December 21, at St. James Hotel at 4:30. Business meeting. Mr. Ketcham spoke on "Physician's Credit."

Thomas S. Flynn, *Secretary*

Washington County Medical Society.

Annual meeting of the Washington County Medical Society was held at the Elm Tree Inn, Westerly, Thursday morning, January 11, 1923.

During the past year two members have transferred to the Providence Society and one new member has been added—making our membership today 27.

Financially, the Society is in a healthy condition.

Dr. Champlin has aroused considerable interest in the State Society and an attempt is to be made to get the members of the County Society to join the State Society.

Dr. LeRoi G. Crandon, of Boston, addressed the meeting on "Surgical Technique" and received a rising vote of thanks.

Officers for the year were elected as follows: President, John E. Ruisi, Westerly; First Vice-President, F. E. Burke, Wakefield; Second Vice-President, M. H. Scanlon, Westerly; Secretary and Treasurer, W. A. Hillard, Westerly; Auditor, S. C. Webster, Westerly; Censor for three years, C. G. Savage, Westerly.

President Ruisi appointed Drs. Champlin, Scanlon and Duckworth as the Legislative Committee.

Adjourned and dined.

W. A. Hillard, M.D., *Secretary*

HOSPITALS

Rhode Island Hospital.

Dr. Pickles

Beginning January 1, 1923, the term of service for internes at the Rhode Island Hospital has been changed from twenty-four to twenty-one months. The service now consists of nine months of surgery, six months of medicine, and six months divided among the various medical and surgical specialties; and it is believed that this rearrangement should make the service here one of the most attractive and valuable rotating services in the country.

The Interne's Association is holding a series of monthly meetings at each of which some topic of general medical interest is presented and discussed, and a cordial invitation is issued to all members of the profession in this vicinity to attend. The speakers and subjects announced thus far are as follows:

November 27, 1922—Frederic V. Hussey, M.D., "Gastric and Duodenal Ulcers."

December 11, 1922—Charles A. McDonald, M.D., "Neurosyphilis," with a demonstration of the intracistern method of treatment by Henry F. McCusker, M.D.

January 15, 1923—Murray S. Danforth, M.D., "Fractures."

February 19, 1923—Alexander M. Burgess, M. D., "Diabetes."

The average attendance at the meetings held up to the present time has been forty-five, and it is expected that this will increase as knowledge of the character and value of the talks becomes more widespread.

After eleven years' service as assistant superintendent, Dr. Norman C. Baker resigned on January 8, 1923, to become superintendent of the Newport Hospital. During his stay at this hospital, Dr. Baker has become known as an efficient and tireless executive, and his loss will be felt keenly. As he goes to Newport, however, he carries with him the best wishes of his many friends here for success in his new position.

Dr. William Holt has been appointed assistant superintendent to succeed Dr. Baker, and Dr. Arthur Hanson has been appointed assistant superintendent for a period of two months. At the first of the year Drs. Ralph DiLeone and John Brothers completed their interneships, and Dr. Cyril Lydon began a two-months leave of absence, during which he is to study obstetrics in New York. The internes beginning service at this time are Drs. Mon Fah Chung, John T. Farrell, Jr., and John A. Picozzi.

City Hospital Notes.

NEWS ITEMS.

At the last meeting of the Board of Hospital Commissioners the following men were added to the staff: John F. Oslin, M.D., visiting physician, Department of Medicine, O. P. D.; Jeffrey J. Walsh, M.D., visiting surgeon, Department Ear, Nose and Throat, O. P. D.; William A. Mahoney, M.D., visiting surgeon, Department of Gynecology.

The regular monthly meeting of the Staff Association was held on December 20, 1922.

ANNOUNCEMENT

(The Journal's California Trip.)

Some of nature's wonders to be seen on the California trip to be conducted by The Rhode Island Medical Journal:

Grand Canyon.

Grand Canyon National Park is located in northern Arizona. Not only is it one of the scenic marvels of the world; it is a convenient rendezvous for the wonderland of the Southwest, that enchanted region which lies in the very heart of America's oldest happenings. Within a day's ride by auto or saddle are the reservations of the Hopis, the Supais and the Navajos. In that magic circle are petrified forests and painted deserts, also relics of prehistoric cliff and cave dwellers. You may climb to the summits of snow-tipped mountains. You may crawl in the depths of canyons profound. Go farther afield and there is a bridge of the rainbow and a chasm of the dead. Hands point backward along a mysterious trail that emerges from nowhere. Naked noons tan you. Nights of a million stars soothe you. Sunsets flood the firmament in a blaze of fire, and sunrises come as suddenly as love comes.

Off the beaten path anything may happen. You see Indians on their ponies, racing home. You glimpse a solitary camp fire. You hear the far-away howl of a wolf and the nearer yelp of a coyote. A sandstorm engulfs you for the moment. A noisy little shower lays the dust. For you yucca and cacti open their timid flowers. It is all so new and so old, so unlike the ordinary ways. No wonder its delights linger for always.

You may have circled the world itself in search of something out of the ordinary. Here it is in your own land. To the scientist the Canyon offers a bird's-eye view of earth's strata and a wealth of specimens; to the naturalist, the plant life of half a continent within the space of half a dozen miles; to the artist, the multi-colored hues of its million acres; to the sensation seeker, thrills of zigzagging trails; to the average man or woman, on vacation bent, an event never to be eclipsed. To every human soul it is something unreal and undreamed of.

In reality, the Grand Canyon is a series of canyons, beginning in Utah below Green River, and ending above Needles, Cal. The so-called granite gorge section, east and west of the railway terminus, is about sixty-five miles long. This great cleft in the earth's crust in general is a wide trough, through the bottom of which is a narrow gorge carrying the muddy waters of the Colorado River. In the upper reaches the chasm narrows, and the effect is more that of a perpendicular rift, narrow and deep.

How the canyon was made, and how long it was in the making, is anybody's guess. Scientists allow eons of time and claim that the principal agent was erosion by water, winds and frost, assisted by volcanic up-thrusts and depressions.

At the outlet of Yellowstone Lake is the large Lake Colonial Hotel. It has an imposing front with large columned porches at each end and in the center, and it is "homey."

The Grand Canyon Hotel is one of the finest and most completely equipped of resort hotels. It is original and stately, 640 feet long by 415 feet wide. The main feature of the hotel is the lounge. This is 175 feet long by 84 feet wide; the sides are practically all plate glass.

The automobile trip through the Park is one of ever-changing variety. Each day's journey unfolds new enjoyments. The landscape changes with amazing suddenness. Each wonder spot seems but the prelude to something more inspiring.

Colorado Springs, Manitou and Pike's Peak.

Pike's Peak, that historic beacon summit which guided the early explorers across the Great Plains, rears its snowy crest in the midst of a veritable wonderland. Here Nature is seen in her grandest as well as most fantastic moods. Great mountain peaks are here—massive, gigantic—lifting themselves into the regions of perpetual snow. Here are a half-dozen stupendous canyons, whose rock walls rise perpendicular a thousand feet. Here medicinal springs gush forth for healing and refreshment. Here are good hotels with recreation grounds, and inviting highways, penetrating the mountains or stretching across the plains, where the motorist finds never-ending delight.

Colorado Springs is a city of 30,105 inhabitants, where the visitor may enjoy all the comforts and conveniences, with a large share of the pleasure and advantages, of modern city life. It has ample hotel accommodations for the throngs who seek it at all seasons of the year. This delightful city is essentially one of homes, where the families of many of the State's most influential business men reside. It has handsome clubs, beautiful and costly churches and schools, and is the seat of Colorado College.

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ORIGINAL ARTICLES

A REPORT ON 12 CASES OF POST-OPERATIVE ABSCESS OF THE LUNG AND TWO CASES POST-OPERATIVE PNEUMONIA.

By Harry Lee Barnes, M.D.*
Wallum Lake, R. I.

While we are not supposed to have non-tuberculous patients at Wallum Lake, post-operative lung cases are quite occasionally believed to be tuberculosis and sent to the Sanatorium. We rarely see the pneumonia or other acute complications, but only the chronic cases, mostly lung abscesses. The following 12 cases of lung abscesses followed operations under general anesthesia.

Case No. 4247. Woman, age 21, admitted Sept. 30, 1918. Sypmtoms began as a bad cold after tonsillectomy 3 months before. Marked dullness, moist rales to the fifth rib on the right side with pleurisy signs at the base. Few rales at the left apex. Expectorated up to 250 c.c. of foul smelling pus daily. No tubercle bacilli. Septic, temperature, great emaciation and weakness. Operation at R. I. Hospital. Recovery. Completely free from lung symptoms four years later.

Private patient. Man age 40. Seen in November, 1918. Lung symptoms began about a week after tonsillectomy, several months previously. A great amount of fetid expectoration. Consolidation in right lower lobe, large moist rales all over right lung and upper third of left lung. Several pneumothorax treatments of 300 c.c. of air were followed by homoptysis and were discontinued. Drainage of the right lower lobe by a Providence surgeon greatly relieved the patient of harassing cough and almost entirely stopped the expectoration of pus, but left a discharging sinus which had not healed nearly a year afterward.

Case No. 6039. Boy, age 14, admitted April 2, 1922. Lung symptoms began "Soon" after tonsillectomy over 4 months previously. Signs of consolidation with cavity in right upper lobe. Slight dullness and moist rales at left apex; X-ray confirmation of above signs. Daily expectoration up to 200 c.c. of foul smelling pus. Temperature up to 103.6. Drainage of abscess in right upper lobe was followed by marked relief in septic, temperature, cough and amount of expectoration, but the patient still has troublesome cough and discharging sinus 7 months later.

Case No. 5270. Man age 20. Patient claimed to have had a "bronchitis" following an operation for ischio rectal abscess in the spring of 1917. Admitted Sept. 25, 1920. Soon after tonsil operation patient had an attack of "bronchitis," accompanied by bad tasting and bad smelling sputum which has persisted. Amount of sputum daily varies from 105 to 400 grams. Right upper and middle lobe show dullness, moist rales and breath changes. Patient declined operation and returned to Sanatorium July 21, 1921. Left base shows dullness and moist rales. Oct. 7, 1921, pneumothorax treatment begun by Dr. Rosenblatt. Nov. 6, right lung pretty well collapsed. Nov. 20, hemoptysis 12 oz., temperature 102.8, probable rupture of right lung. Nov. 30, 1921, 400 c.c. of foul-smelling pus evacuated from right pleural cavity. Dec. 11 patient appears some better. Amount of pus discharged from tube in right pleura much reduced by gentian violet irrigations. Dec. 23, 1921, patient died, a few days after developing signs of pneumothorax on untreated side.

Case No. 5908. Man, age 32. Lung symptoms began a few weeks after appendectomy in August, 1921. Admitted Dec. 19, 1921. Dullness and medium moist rales down to second rib on right side. Irregular temperature from normal to 102.5. Expectoration of offensive smelling pus up to 390 grms. daily. X-ray shows marked mottling from second to fifth ribs on the right side. Left lung: Apex cloudy with slight mottling. Fine mottling in the first five interspaces. Operation in the Woonsocket Hospital in January, 1922, for drainage of abscess in the right lung. Patient was relieved of sepsis and expectoration of offensive pus and is working daily but has some cough (September, 1922).

Case No. 5461. Woman, age 18. Three days

*Read before the Providence Medical Society November, 1922.

after tonsillectomy in November, 1920, had pain in the right side, cough and dyspnea. Has noticed a bad odor to the sputum since November. Admitted Feb. 10, 1921. Whole right lung dull and many medium moist rales throughout. Cavity signs about third and fourth ribs. Cavity shows plainly under fluoroscopic examination. Left lung free from definite signs. Operation advised. Patient's subsequent condition unknown.

Case No. 6185. Girl, age 14. Cough and expectoration of offensive sputum began soon after tonsillectomy in August, 1921. Admitted June 28, 1922. Dullness and suppressed breathing at both bases, with cavity signs at right base. X-ray shows dense mottling, suggesting consolidation in lower half of both lower lobes. Under postural drainage four times daily, amount of sputum dropped from 125 grms. to 78 grms. in a few months, with reduction of temperature, gain in general appearance, and gain of 3 lbs. in weight. Operation not advised.

Case seen in consultation. Woman, age 30, a few days after tonsillectomy, developed cough and pain in the right side. A few weeks later a slight amount of fluid was drawn from right pleural cavity. Patient had been expectorating a scanty amount of foul smelling sputum at times. My examination about 4 months afterward showed some dullness at the right base and a few rales at the left apex, where she had recently had a little pain on breathing. X-ray showed considerable enlargement of the bronchial trunks in the right lower lobe and a shadow about the size of a butternut, suggesting consolidation near the right base in the lung parenchyma, near the spine. Attempts at postural drainage apparently did not bring up sputum but did cause the breath to have an offensive odor during the time that patient was in inverted position. Patient refused to have bronchoscopic drainage tried. In 6 weeks the X-ray appearance of the abscess appeared unchanged, but the cough and general condition improved, and the expectoration ceased.

Case 5541. Woman, age 27. Cough and other lung symptoms began one week after removal of tonsils and adenoids, July 17, 1920. Admitted April 5, 1921. Dullness over whole right lung, most pronounced at base, where there was increased vocal resonance and bronchial breathing. X-ray film showed clouding at right base. Patient has noticed a bad taste to the sputum and her mother noticed a bad odor to the breath. Patient left Sanatorium unimproved.

Case No. 4780. Boy, age 10. Tonsil and adenoid operation April, 1919. Admitted to the Sanatorium Sept. 15, 1919. The onset of the cough and expectoration and other pulmonary symptoms followed soon after the operation. The sputum has a very offensive odor, the maximum amount for 24 hours being 225 c.c. Examination showed dullness and medium moist rales throughout the right lung, most marked at the base. A few medium moist rales at the left apex and left base. X-ray film showed heavy clouding and mottling at the right base with two areas of rarefaction. Patient was discharged Dec. 22, 1920, unimproved.

Patient seen in consultation. Woman, age 34. About 3½ years previously several teeth were extracted under ether. A few days after the operation, cough and the expectoration of offensive sputum began, and has continued ever since. The cough was very harassing and when the patient was stood on her head, about half a pint of offensive pus gushed out. Examination shows moist rales, bronchial breathing and pectoriloquy at the left base. Moist rales were scattered over the whole left lung and to a less extent over the right lung. Postural drainage tried for several weeks gave no relief.

Case seen in consultation. Man, age 24, seen by me in October, 1920. Operation for tonsils and adenoids in the preceding July was followed in about 3 weeks with cough and expectoration and loss of strength. Examination showed dullness, bronchovesicular breathing and other signs of consolidation in the right lower lobe. Patient had a harassing cough and profuse expectoration of fetid pus. Operation advised and refused. About 3 weeks later patient had a violent coughing spell and enough dyspneoa while emptying out the pus, to frighten him. Operated on the following December in Boston. After several weeks of drainage the sinus almost closed and patient exceeded his previous maximum weight and returned to work absolutely free from lung symptoms. After working a few weeks, patient died after a short illness with symptoms of cerebral spinal meningitis. I have seen another patient who was operated on for a lung abscess and who died of meningitis occurring several weeks after what ap-

peared to be complete recovery from all lung symptoms, the health seeming perfect.

In all the above 13 cases, examination of the sputum for tubercle bacilli was repeatedly negative.

The following case of post-operative pneumonia was of considerable interest to the writer, who was intimately acquainted with the victim, the latter being a physician. Contemplating the extraction of 10 teeth under gas, the patient confided to his wife his obsession that blood would be aspirated and took elaborate precautions to have the mouth clean. The teeth, which had recently been scraped, were given an extra scrubbing and the mouth and throat repeatedly washed with salt solution and cleansed with alcohol just before going to the dentist's office. The dentist was asked to take care to keep the head forward to prevent blood going back. The dentist, who had no fear of blood aspiration, and who ascribed the patient's request to nervousness, allowed the head to go back while the patient was unconscious and bleeding freely. Soon after the backward movement of the head, the patient's wife, who was a trained nurse, noticed a slight cough and gurgling sound, followed in a few seconds by marked blueness of the face and very weak pulse. These symptoms disappeared in a few minutes, but on the third day, pleuritic pain in the right side, a chill, cough and rise of temperature to 100.6 ensued. Signs of pneumonia at the right base and finally involving the lower half of the right lung, and signs over an area the size of a silver dollar about the termination of the left bronchus, appeared. Fortunately perfect recovery followed in about a month. In addition to the case of pneumonia and the cases of abscesses of the lung following teeth extraction reported in this paper, the writer learned through colleagues of 4 cases of pulmonary sequelæ to teeth extraction under anaesthetic. Of these, 3 cases were pneumonia, of whom all died, and one case of lung abscess, who recovered.

Diagnosis.

Whipple and his associates at the Presbyterian Hospital in New York have shown that in post-operative cases with unexplained temperature, the X-rays frequently show a wedge-shaped shadow extending from the hilus toward the pleura and clearing up soon after defervescence, which is regarded as a pneumonia.

In the last five years, I have seen over 20 cases of abscess of the lung which have been diagnosed as tuberculosis. There is a great similarity in the symptoms of chronic lung abscess and pulmonary tuberculosis, for in both there may be cough, expectoration, pleurisy and blood spitting, night sweats, emaciation and progressive weakness. Any patient who says his lung symptoms began after teeth extraction or nose and throat operation, especially tonsillectomy, should be suspected of having a lung abscess.

While it is common enough to see tuberculosis patients with negative sputum, it is nevertheless true, that when a patient expectorates a large amount of purulent sputum which is free from tubercle bacilli, and which has an offensive odor, he almost certainly is suffering from non-tuberculous lung disease. Lung abscesses are usually at the bases, and lesions worse at the bases are rarely tuberculous.

It is often difficult and sometimes impossible to decide whether a post-operative lesion was originally bronchiectasis or abscess because lung abscess patients in a few months may show X-ray evidence of bronchiectasis, which has been produced by the abscess and some patients who originally have bronchiectasis finally develop true abscesses. Some clinicians do not consider that there is a true abscess without an abscess wall. In most of the chronic lung abscesses I have seen, the X-ray showed little or no evidence of an abscess wall.

In many of these post-operative cases, good stereographic pictures of the lung will show what appears to be the infiltration of the lung tissue with a thin characteristic homogeneous shadow, which suggests pus.

Prophylaxis.

All operations on the upper air passages should be followed up a month or two afterward or many post-operative pulmonary complications will never be heard of by the operators, who will get no incentive to reduce the risks. While the occasional occurrence of septic emboli must be admitted, the fact that in twelve of the fourteen cases of lung abscess after tonsillectomy above reported the right lung was most affected, points directly toward aspiration as the usual cause. Thorough cleansing of the nose, throat and mouth before operating and sterilizing the field with iodine are

logical and should reduce the danger. I can say nothing of the details of operative technique, as I know nothing of the subject, but I cannot refrain from giving my impression that details of operative technique are not the main defense against aspiration. I believe that the best protection is an anesthesia not too deep for coughing, a position (like the sitting posture) in which the head can be brought forward to drain the blood from the mouth, and an operator keenly alive to the danger of aspiration, who will watch the bleeding and bring the head forward in time. Fluids do not run up hill and if statistics from a sufficient number of cases can be produced to show that lowering the head will prevent aspiration, a strong incentive would be given toward operating in this position.

Treatment.

In lung abscesses, if the X-ray shows that the abscess wall is small and not increasing in size, if the location is one difficult of access and if there is little evidence of general sepsis, it would seem sensible to let it alone. If it is large, well defined and rapidly extending to the periphery, with marked symptoms of sepsis, operation seems indicated. If both lungs are extensively involved, operation seems hopeless and hardly worth while. We have started many of our abscess and bronchiectasis cases with postural drainage, by having them lie across a table on their stomach with the head hanging down to the floor, 3 or 4 times a day. This procedure usually will evacuate several ounces of pus and sometimes a teacupful, in a few seconds, and a few cases have seemed to be improved by it. In most of the cases there was no marked improvement. Dr. Lynch and others have reported very striking results by drainage through the bronchoscope but we have been unable to persuade patients to try it. Good results have been reported from artificial pneumothorax but there is danger of infecting the pleura with the needle and there would also seem to be some risk in squeezing an abscess that is not surely open to drainage. Our two attempts have been failures.

On 12 abscess cases:

5 were operated on and of these 5 operative cases
- 2 recovered completely
- 1 was relieved of septic condition and is able to work but has some cough
- 2 were relieved of most of the expectoration of offensive pus but had a discharging sinus when last seen.

Of the 7 cases not operated on:

1 was treated with artificial pneumothorax but the treatment had to be abandoned because each treatment was followed by hemoptysis. He was later operated on and is one of the above cases in which a sinus resulted.

1 was treated with artificial pneumothorax, developed an empyema on the treated side, and after improving from this condition finally died of spontaneous pneumothorax on the untreated side.

1 improved somewhat under postural drainage.

4 have passed from observation.

Summary.

Of the 14 post-operative pulmonary sequelæ:

12 were abscesses
- 2 were pneumonia
- 2 cases followed teeth extraction
- 1 case followed appendectomy

11 cases followed tonsillectomy and adenectomy

11 involved the right lung mainly
- 2 involved the left lung mainly
- 1 involved both lungs about equally

9 cases had involvement of the lower half of the lung mainly

5 cases had involvement of the upper half of the lung mainly.

Case 6372. Woman, age 27. R. I. Hospital records show that tonsils and hypertrophied turbinates were removed under ether Feb. 11, 1916. The next morning "the respirations and temperature were elevated, with pain in the left chest. Percussion note impaired over the left chest. Breath sounds distant and bronchial. X-ray examination shows increased density of the left lung." Discharged from hospital against advice, Feb. 20. Patient returned to hospital because of cough and chest pain.

After admission to the Sanatorium in November, 1922, patient's husband claimed that she never had completely recovered from the acute illness following tonsillectomy. The breathing was suppressed over the whole left side and absent at the base. The X-ray showed considerable mottling on the left side in the first 4 interspaces, and opacity from the fourth rib to the base. No hemoptysis or fetid sputum. Tubercle bacilli not found. Diagnosis: Cirrhosis of left lung with thick pleura.

SOME OBSERVATIONS ON RADIUM-THERAPY IN CANCER, AT THE INSTITUTE OF RADIUM, PARIS.

By Malford W. Thewlis, M.D.
Providence, R. I.

The association of Madame Curie's laboratory with the Biologic Laboratory, directed by Dr. Cl. Regaud, makes the Institute of Radium of Paris University the foremost center of the world for the study of radium. The therapeutic applications are made at the Pasteur Hospital, while the biologic work is conducted at the Institute, which is situated near the Faculty of Medicine.

Some of the most valuable works in radium-therapy are being accomplished by scientists who secrete themselves in their laboratories, occasionally emerging to give the world the results of their researches. Regaud, whose object in life is the advancement of science, devotes his entire time to the free treatment of sufferers from the most terrible of all afflictions—cancer.

Regaud's technique is different from that we are accustomed to observe. His work on cancer of the tongue and uterus is remarkable.

At the Pasteur Hospital, a histologic examination of every case is made before treatment is instituted and the treatment naturally depends upon the type of neoplasm present. The principle of treatment is not the slow modification of cancer cells, not the reinforcement of the local defense of the organism, but the *destruction of all the cancer cells.* This must be accomplished without grave lesion of the other anatomic elements, which enter into the structure of neoplasms or which form the surrounding tissues.[1]

One of the most important considerations in the radiumtherapy of cancer is the intensity of radiation and the duration of the application. Regaud has pointed out[2] that although 100 milligrams of radium given for 10 hours represents the same dose as 10 milligrams for 100 hours, the difference of intensity and time produced different results. He gave the example of a certain case of epithelioma of the tongue, which was greatly improved and apparently cured with a dose of 10 millicuries of emanation, destroyed in 8 days, by 5 punctures with needles. Had it, on the contrary, been treated with 10 millicuries in 1 day in 2 punctures, the trouble would have been aggravated. A certain case of epithelioma of the cervix of the uterus, not invading the surrounding tissue, was apparently cured with 1 dose of 20 millicuries destroyed (emanation) in 3 days with one focus, while it probably would not have been cured if one had administered the dose by fractions in four weeks. The rules for intensity given by Dr. Regaud are as follows:

1. Tubular epithelioma of the cervix, with the intensity of 100 to 150 microcuries of emanation of radium per hour and per focus.

2. Globo-cellular sarcomata and lympho-sarcomata with the intensity of 50 to 100 microcurie hours.

3. Carcinomata of the breast, with the intensity of 25 to 50 microcurie hours.

4. Epidermoid epithelioma and tumors of connective tissues rich in fundamental substances, with the intensity of 5 to 25 microcurie hours.

One should seek to obtain the desired result in one treatment only, instead of dividing the dose or giving repeated treatments. This, because it has been observed that in the course of successive treatments, healthy tissues become more and more vulnerable, while the cancerous tissues become more and more unaffected. Therefore, a single treatment is always the best—is always the aim.[3]

In various clinics the technique is to use frequently repeated doses of radium or X-rays, and we often see patients with basal-cell epithelioma of the skin who have received several treatments without being cured. The same technique has been used for inoperable cancer of the breast. Radiumtherapeutists often give an intense and short radiation, possibly 100 milligrams for several hours. Dr. Regaud and his collaborators were perhaps the first to use a radiation of a *feeble intensity prolonged for four, eight or ten days without interruption.* For example, in treating cancer of the tongue, ten or fifteen needles containing emanation of radium or the salts of

[1]L'Erreur du Fractionnement, de l'espacement et de la Répétition exagérés des doses, dans la Radiotherapie des Cancers, Cl. Regaud, Feb. 4, 1922, Paris Medical.

[2]Radiotherapy of Cancers, Dr. Regaud, presented to the 5th Congress of the International Society of Surgery, Paris, 9-23 July, 1920.

[3]The Work of Dr. Regaud, Medical Review of Reviews, July, 1921.

radium are inserted into the tongue and left in place for eight days.

For several years German roentgenologists have vigorously worked against the use of small and repeated doses. They inaugurated the large doses for deep treatment of fibroma and cancer of the uterus and breast, with strong filtration and a multiplication of the surfaces of cutaneous entrances. This treatment is given for several hours by means of the new German apparatus, with a Furstenau tube. There are several German X-ray machines installed in Paris, one at the Institute of Radium.

What is the advantage of prolonged applications of radium with feeble intensity? Drs. Regaud and Lacassagne, in their biological studies, have pointed out that the sensibility to radium is at its climax at the moment when the nucleus of the cell divides itself. The applications of radium, therefore, should be prolonged in order that the cycle of evolution of the cells we must reach should include a division of the nucleus.[4]

One might believe that these long applications of radium might produce considerable reaction and sloughing. This is a question of selecting the proper filtration and I have not seen any ill results follow this technique at the Institute of Radium, of Paris. My own experience taught me that in some cases a treatment of 12 days gives the best results and almost invariably there is no severe reaction following this prolonged radiation.

Radium Puncture.

In order to reach all of the cells of a tumor, it is necessary to apply the radium to the deeper parts of the neoplasm. This may be accomplished by means of "bare tubes" of emanation of radium inserted into the growth or by means of needles containing emanation of radium or the salts of radium. Dr. Reguad employs "bare tubes" in certain cases of cancer, especially large neoplasms, but most often uses the platinum iridium needles, into which tubes containing emanation of radium are inserted. The needles are previously dipped in wax in order to hold the glass tubes within.

These platinum iridium needles vary in length from 5 to 30 millimeters and are 4/10 mm. thick. The needles are inserted into the neoplasm at a distance of a centimeter or less from one another and the entire growth and immediate surrounding tissues are included. These needles are left in place for 4 to 8 days and then removed.

Dr. Regaud prefers the salts of radium to emanation of radium, as the radiation is much more constant with the former; as soon as more radium is available, platinum iridium needles containing sulphate of radium will be employed. The salt of radium is in a glass tube and placed in the platinum iridium needle, which is then permanently closed with gold.

CANCER OF THE TONGUE.[5]

Regaud uses radium-puncture for cancer of the tongue and several sterilized needles are inserted into the tongue, into the tumor itself, and one to one and one-half centimeters of the surrounding area are included. These platinum iridium needles are sewn into the mucosa of the tongue and the ends of the thread are placed over the ear and held by adhesive tape. These are left in place for 8 days, during which time the patient is on a liquid diet. Local anesthesia with cocaine makes the procedure practically painless. At the end of 8 days the needles are removed and there is very little reaction following this application.

In certain cases, Dr. Regaud uses radium-puncture for the adenopathy which accompanies the condition, or later X-ray therapy or surgery is resorted to. The dose for cancer of the tongue is usually from 20 to 30 millicuries destroyed in 8 days.

Dr. Regaud gives the dosage in terms of "millicuries destroyed" and this may be applied to emanation of radium and also to radium element. As I pointed out in *The Urologic and Cutaneous Review* of January, 1922, one millicurie of emanation of radium destroyed is equivalent to 132 milligram hours with radium sulphate. It is convenient to use the term "millicuries destroyed" in both instances. The quantity of emanation of one milligram of radium element in one hour is equivalent to 0.00751 millicuries. This quantity would be for 100 milligrams in 10 hours (1000 milligram hours) $0.00751 \times 1000 = 7.51$, which represents 7.51 millicuries of emanation destroyed; likewise, 100 millicuries during 10 hours corresponds to $0.00751 \times 1000 = 7.51$, which signifies the millicuries destroyed. The intensity is obtained by dividing the total dose by the time, therefore $7.51 \div 10 = 0.751$ millicuries destroyed per

[4]The Urologic and Cutaneous Review, January, 1922.

[5]The Urologic and Cutaneous Review, January, 1922.

hour. *With a tube of radium this expresses a constant intensity; with a tube of emanation of radium it expresses an average intensity.*

Cancer and Syphilis.

Cancer often develops from the lesions of syphilis and sarcomatous degeneration may be engrafted upon a gumma. Regaud states that *it is of no practical interest in cancer, to give treatment for syphilis. It is useless and much valuable time is lost, and it may even hasten the neoplastic process.*[6] As soon as biopsy shows cancer to be present there is no need of antisyphilitic treatment. I recall a patient I treated a few years ago, a man who had sarcoma of the neck which developed from a gumma. Antisyphilitic treatment did a great deal of harm in this instance.

Cancer of the Lips.

Regaud concludes as follows:[7]

1. "....epidermoid cancer of the lips is curable by roentgentherapy and by Curietherapy (Regaud's synonym for radiumtherapy), even when the neoplasm has reached a great development.

2. Curietherapy is in every respect preferable to roentgentherapy.

In thin cancers, Curietherapy by superficial application suffices.

In thick cancers, Curietherapy by radium-puncture is more satisfactory or even indispensable.

The very good results obtained in cancers which had greatly outgrown the possibility of operation, permit us to consider as easy the cure by Curietherapy of cases operable and *a fortiori* the cases in the beginning.

Nevertheless, we must not lose sight of the fact that a good technique is the *conditio sine qua non* of success in radiotherapy, as in surgery. Consequently, the choice of the therapeutic agent must remain dependent upon the relative value of the available means.

3. In the absence of a radiotherapeutic technique having been proved for the healing of glandular localizations, these when they are operable, must actually be treated surgically."

Cancer of the Uterus.

Depending upon a histological examination, Regaud usually uses emanation of radium tubes, covered with 2/10 mm. of aluminum in a blind catheter made of pure gum rubber. Several of these emanation tubes are placed in the catheter, which is used for an intrauterine application. Three gold tubes with 15% platinum, 2.55 mm. thick, are also used, each one containing a tube of emanation of radium or a platinum iridium needle containing sulphate of radium. One of these gold tubes is placed in a hollow cork and a small piece of cork covers each end, the whole being dipped in wax, this cork is applied to the cervix. The remaining two corks are between a wire spring and the gold tube is placed in each one. These are used for the parametrium in the event it is involved. The whole apparatus is usually left in place for a period of four to eight days but the dose varies with the type of cancer present. The tubes are, however, removed each day and an antiseptic douche given.

Surface Applications.

For superficial epitheliomas it is often sufficient to use a flat applicator and for this purpose the emanation of radium tubes or platinum iridium needles containing sulphate of radium are employed. The needles are sometimes embedded in either dental composition, gutta percha, or in lead. An applicator may be made by cutting places in the lead for the needles, about 5 millimeters apart; another piece of lead is placed on top of this, then 2/10 mm. of aluminum and finally several millimeters of cork. With this filtration it is possible and convenient to leave the applicator on the diseased surface for several days.

In radiumtherapy the matter of filtration is of great importance. Regaud is able to follow his technique without severe reactions resulting because his methods of filtration are carefully studied. The secondary rays produced by the various metals used for filters are capable of doing much damage, but if platinum, gold and aluminum are used, the secondary rays cause little harm. In surface applicators, the lead filters the *beta* rays of the radium, and the aluminum and cork filter the secondary rays produced by the effect of radium on the lead.

Dr. Regaud's collaborators at the Pasteur Laboratory are Drs. Lacassagne and Jolly (Department of Histology); Ferroux and Coutard (X-ray department). The experiments upon animals are made in this laboratory as well as the histologic

[6]Paris Medical, April 2, 1921.

[7]Bulletin de l'Association Française pour l'Étude du Cancer, Ext. of, July, 1921.

examinations of all patients. At the Pasteur Hospital, where the actual therapeutic applications are made, Dr. Regaud is assisted by Drs. Cesbron, Monod and Richard. The emanation of radium tubes used at this hospital are prepared daily under the direction of Madame Curie.

NOTES ON A SHORT EXPERIMENT IN THE TREATMENT OF ORAL SEPSIS.

By Frank Mears Adams, M.D.
Providence, R. I.

I beg leave to report and discuss the results of a short item of experiment which we made at the Out-Patient Department of the Ear, Nose and Throat Division at the R. I. Hospital, beginning November, 1917.

It was our duty and privilege to examine all the patients upon their first appearance at the clinic. As you know, a large number of these were school children who came at the command of the City Health Department, with papers stating that the bearer perhaps needed removal of the adenoids and tonsils. After seeing several hundreds and perhaps thousands of such children admitted in such a routine manner in the years previous, we were struck with the fact that a large percentage were suffering from general oral sepsis—exhibiting not only infected tonsils and adenoids but also extensive dental caries.

Thereupon, we selected 26 children, none of whom were in good physical condition and all of whom carried decayed teeth and infected and hypertrophied tonsils and adenoids. These children were sent to their dentists and were observed carefully for a period of twelve months by the School and District Nurses and by myself, and were seen again in 1919 at two different six months intervals.

It required persistent coaching and severe and, I fear, rather insulting language to one or two dental brothers to get the desired results. I am proud to say, however, that 23 of this group of 26 children finally received the very best and most complete cleaning up of the teeth we have ever known of. Every bad root was removed or cleaned up and every carious cavity was treated.

Our interest in this process was confined to one question: What is the effect upon tonsils and adenoids in children, when the rest of the oral cavity is producing or holding septic material?

Our results were very gratifying. In seventeen children, the tonsils shrunk up so markedly that one would almost believe X-ray had been used. Every evidence of improvement appeared and it was very plain that the adenoid was equally beneficially influenced. So that, after seeing these children at the end of two years we concluded that surgery could be dispensed with, for the present at least.

Six of the group of 26 were not sufficiently helped to make it safe to leave them. In these six we found advancing cervical adenitis and, according to our present records, four of this group of six have positive Von Pirquet tests and are undoubtedly tuberculous.

There are various points of interest in experimental observation of this nature carried on in large public clinics, and in private work.

Medical School Inspectors.

The medical school inspectors are doing a wonderful work and are, in addition to being a public benefaction, a decided positive help in drumming up business for the profession in general. If the profession would back up this work, business would increase and public charity clinics would be less popular.

Radical Antagonism of the Laity and Medical Men to Surgical Treatment of Oral Sepsis.

This antagonism is founded upon general principles and often based upon experience with careless and inexperienced operators whose work has not produced the desired results.

A broad field for discussion is here opened; one which has never been frankly aired. In this town, practitioners who in the effort to do their patients a favor by sending them for tonsil surgery to a free clinic, do not seem to realize that in thus overloading these clinics they make it necessary for the surgeons on duty to delegate their tonsil operating in part to inexperienced internes. This factor accounts for most of the poor tonsil surgery attributed to the three largest hospitals of Providence.

Selection of Proper Cases for Surgery.

The majority of patients the throat surgeon examines are loaded down with an overwhelming degree of oral sepsis. A very cursory examination

(*Continued on page 47*)

THE RHODE ISLAND MEDICAL JOURNAL

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Section on Medicine—4th Tuesday in each month, Dr. Charles A. McDonald, Chairman; Dr. C. W. Skelton, Secretary and Treasurer.

R. I. Ophthalmological and Otological Society—2d Thursday—October, December, February, April and Annual at call of President Dr. H. E. Blanchard, President; Dr. Jeffrey J. Walsh, Secretary-Treasurer.

The R. I. Medico-Legal Society—Last Thursday—January, April, June and October. James B. Littlefield, Esq., President; Dr. Jacob S. Kelley, Secretary-Treasurer.

EDITORIALS

In the retirement of Dr. Buxton as business manager, the JOURNAL loses a competent executive. Quiet and unostentatious, he worked constantly for the betterment of this publication and during his incumbency to office the JOURNAL rose from a narrow financial competence to an assured financial foundation.

His co-workers may well feel gratified in the privilege of his personal association. We take occasion to congratulate him upon the part he has played in the achieved prosperity of the JOURNAL.

Dr. Buxton's successor is a man of somewhat pronounced personality, who not only brings a natural business acumen into our publication affairs, but a considerable experience in parallel lines; in venturing a hope that his tenure in the office of business manager of the RHODE ISLAND MEDICAL JOURNAL may be long and bring added prosperity, we hail and greet Dr. Frank Mears Adams.

QUACKS.

The medical profession is perennially confronted with the problem of the irregular practi-

tioner and the question arises as to what should be the attitude of the medical profession toward the quack. Shall they pursue a militant, aggressive campaign, and appear before a cynical and suspicious legislative committee with arguments which have little influence on the committee's predetermined action, or shall they adopt a "*laissez-faire*" attitude in the hope that, like its many predecessors, the present humbug will burn itself out? Somewhere between these two extremes doubtless lies the correct position for the medical profession. Instead of attempting to prevent these irregulars from practicing their particular form of treatment, let us concentrate our efforts upon insisting that every person claiming the privilege of treating the sick shall show an average knowledge of the fundamental sciences pertaining and necessary thereto, i. e., anatomy, physiology, chemistry, pathology, and physical diagnosis. With an average education in these fundamentals, there need be little quarrel as to the means used to cure disease, whether by drugs, manipulation, surgery, or other modalities. At least, equal privileges should be predicated upon equal attainments.

Just at present we have with us the chiropractor, who claims the right to treat the sick and the privilege of signing death certificates as granted to holders of the title of M.D. In regard to this latter question of signing death returns, we should take this position—not only let them sign their certificates of cause of death, but *make* them sign them. This would at least serve to keep the records straight and deaths due to their ignorance would not be placed at the door of the medical profession, whose members are called in to the case at the last moment, as the chiropractor takes his precipitate leave.

HUMAN PHYSIOLOGY.

The continued study of physiology by physicians is sadly neglected. New bits of knowledge are being constantly contributed by experimentation. Our knowledge of the anatomy, both gross and microscopical, is exact for most bodily structures. While knowledge of the structure of the central nervous system and some microscopical anatomy is not complete, it is a fairly exact science. Quite the reverse is true of our knowledge of normal physiology. There are a vast lot of bodily functions which are not understood at all, others are partially known, still others which are well understood. Physiological processes are so intricate that it is not surprising that our ignorance is still so great.

This void in our knowledge about bodily process leads to many wrong conclusions in diagnosis and treatment. To be able to interpret pathological processes correctly it is necessary to possess exact knowledge of all physiological processes involved. In the diseases of the gastro-intestinal tract we are often misled by our ignorance of the normal, yet very much is known about the motor and chemical processes of digestion. This lack of knowledge of physiological processes leads to fantastic diagnosis of many little understood diseases. This is particularly true of the ductless glands. Altogether too much confidence is placed on the supposed functions of these glands, and unfortunately there are some physicians who are treating certain symptoms and signs and explaining their causes thereby, when known facts do not warrant any such conclusions.

It is a field where one's fancy can wander and speculate, often times to the financial advantage of the dishonest doctor. Undoubtedly it is fascinating field and the future will reveal the truth about the functions of the ductless glands about which very few facts are now known.

We expect a surgeon to know thoroughly the anatomy of the body or at least those parts with which he must deal during any operative procedure. It is just as true that the internist should know thoroughly not only the anatomy of the whole body, but also be well versed in normal human physiology. There are many processes of bodily function which are known, many others are based upon doubtful foundation and still others about which little are known. A thorough knowledge of physiology is necessary if one expects to become a keen diagnostitian and skillful practitioner.

Doctors are prone to listen to traveling salesmen and advertisements about the effects of certain chemicals and drugs upon the body without investigating the facts. Every physician should read journals on physiology and pharmacology, digest their articles carefully, for many false conclusions are reached by investigators. He will then be building on solid foundation and will stand

in a position to interpret pathological conditions in advance of a less studious physician.

It is not easy to keep both feet on the ground when some plausible argument is advanced to explain some problem. It is necessary that one should question all scientific conclusions, and watch for its corroboration. A physician, however, should not pass judgment on new investigations from what he learned thirty years ago in medical school.

REMEMBER.

That all arrangements must be complete by the middle of April for the JOURNAL'S excursion to California to the meeting of the A. M. A.

Those who intend to go will do themselves a courtesy by giving the matter immediate attention.

Glance again over the itinerary in the January issue, and the various places of interest to be visited on the way, that appears in that issue and succeeding ones.

EN ROUTE

THE JOURNAL'S CALIFORNIA TRIP

A CONTINUATION.

Colorado Springs is environed by a greater number and variety of scenic wonders, easily accessible, than any other like area on the globe; superb roads and boulevards, and in many cases lines of electric railways, lead to the numerous points of interest.

Among the more noted features are: Pike's Peak; the Crystal Park Auto Trip, Mt. Manitou Scenic Incline, the Garden of the Gods, the trip to Cripple Creek, North Cheyenne Canyon and the famous High Drive, South Cheyenne Canyon and the Seven Falls, Stratton Park, Broadmoor, Manitou, Williams Canyon, Cave of the Winds, and Ute Pass. Off the beaten path there are scores of places of unrivaled beauty.

Five miles from Colorado Springs, and immediately at the base of Pike's Peak, lies Manitou, the "Saratoga of the West." Here are the mineral springs to which the Indians brought their sick long before the coming of the white man; and, since the healing waters were the gift of the Great Spirit, they named their paradise "Manitou." Sparkling, effervescent, highly agreeable to the taste and adapted to the cure or alleviation of many chronic ills, these soda and chalybeate waters are a prime attraction of the resort. A $400,000 bath house, utilizing the famous mineral waters, has recently been completed.

The town itself is beautiful, with its well-kept lawns, bordering trees, fountains, and attractive pavilions covering the springs; while, clinging Swiss-like to the hillsides, or embowered in the greenery which fringes Fountain and Ruxton Creeks, are numerous picturesque summer homes.

Near Manitou are found the wonders of canyon and gorge, of dizzy height and awful depth, of gigantic rock-form and weird cavern, and the beauties of dashing mountain stream and of sylvan peak-guarded dell. Here are rare flowers for the botanist; in the canyons by which the mountains are gashed and riven the geologist may read the world history. Here, too, is the great Peak, whose snowy summit (14,109 feet) may be gained via the Pike's Peak Cog Railway, or the auto highway; or it may be reached afoot, on horses or on burros.

Nature has indeed dowered Manitou with a prodigality elsewhere unmatched, and it has justly received the palm as the most charming of summer resorts.

ROYAL GORGE.

This is the way the Rev. David M. Steele describes the Grand Canyon of the Arkansas.

"The Royal Gorge is a gigantic chasm, in the heart of the mountains, cut from the summits of lofty peaks to their very foundation stones. Farther and still farther did we penetrate, and, as we did so, the canyon became narrower and the massive walls rose higher, until, in the center, the gorge is only thirty feet wide, while the walls rise 2,627 feet above the track. At this point there is not sufficient room for the railroad and the river to run side by side; hence it was necessary to build the famous Hanging Bridge, which is suspended parallel with the river by immense steel supporters buried in the granite walls on either side. This was the first railroad that ever penetrated the Rocky Mountain fastness. Even today here is a dozen-mile panorama of marvels that beggar description. At Hanging Bridge the rugged rock cliffs, enclosing the roaring river and the track,

rise so abruptly in mid-air for half a mile that they shut out the day and cause stars to shine even while the sun is high in heaven.

The Grand Canyon, through which the Arkansas pours from the high country to the lower, is ten miles long, and the railroad, by a marvel of engineering enterprise and dint of much blasting and ballasting, has made of it a thoroughfare renowned the world over. We slide, clinging close to every twist and turn, where there is scarcely space betwixt wall and river for the single track. The narrowest portion of the passage is the wondrous Royal Gorge. Here the red granite and gneiss walls, sparkling with mica, tower aloft. The sky is a thread almost obliterated by the jagged ramparts. The river boils madly through. The engine sways now to the right, now to the left, dragging the train. The vista ahead, momentarily blocked, opens again, and in some unexpected manner a way is eventually found.

Now, when one makes such a journey, not by any means the least important of the things he learns and the new impressions he receives is a new and great respect for the railroads of his country—both for the railroad as an institution and for railroading as an occupation. On a journey such as this, after seeing any such road in all its parts and such a system in all its workings, one decides that more wonderful even, if possible, than the country that these roads traverse is the human genius which in fifty years has shortened the journey across the continent from five months to as many days, and the still greater genius which, coupled with faithfulness and fidelity, have made that rate of speed commensurate with safety."

SOCIETIES

Providence Medical Association.

The regular monthly meeting of the Providence Medical Association was held at the Medical Library, 106 Francis Street, Monday evening, February 5, 1923, at 8:45 o'clock.

Program: Paper, "Arthritis," Dr. Loring T. Swaim, Boston, Mass.

Discussion by Dr. M. S. Danforth, Dr. Geo. S. Mathews, Dr. Roland Hammond.

The Standing Committee approved the application of Dr. George K. Butterfield. Collation followed.

Dr. Peter Pineo Chase, *Secretary*

Woonsocket District Medical Society.

Meeting of Woonsocket District Medical Society was held Thursday, January 26, at 4:30 P. M. at St. James Hotel. Dr. W. F. Barry spoke on "Hospital Standardization."

T. S. Flynn, *Secretary*

HOSPITALS

Providence City Hospital.

News Items.

On January 1st Dr. John A. Picozzi finished a six months service and went to the Rhode Island Hospital to begin his interneship there. On the same date Dr. Reuben C. Bates and Dr. Ralph DiLeone began interneships.

Dr. William Holt, who has been assistant superintendent since April 1, 1920, resigned to accept a position as an assistant superintendent at the Rhode Island Hospital.

Dr. Maurice Adelman, a former interne, has just finished a service at the Children's Hospital in Boston and is acting temporarily as second assistant superintendent to fill the vacancy made by Dr. Holt's resignation.

At the annual meeting of the Staff Association held at the Hospital on January 17, 1923, the following officers were elected: Dr. Carl D. Sawyer, President; Dr. Bertram H. Buxton, Vice-President; Dr. Harmon P. B. Jordan, Secretary.

At the annual meeting of the Board of Hospital Commissioners the following Consulting, Visiting and Resident Staff Members were appointed:

Resident Staff—Dennett L. Richardson, M.D.; Harmon P. B. Jordan, M.D.

Consulting Staff—Joseph M. Bennett, M.D.; Frank T. Fulton, M.D.; Halsey DeWolf, M.D.; Edmund D. Cheseboro, M.D.; Frank L. Day, M.D.; George S. Mathews, M.D.; Edgar B. Smith, M.D.; John W. Keefe, M.D.; Gardner T. Swarts, M.D.; John T. Farrell, M.D.; N. Darrell Harvey, M.D.; Frederick T. Rogers, M.D.; George W. VanBenschoten, M.D.; George L. Shattuck, M.D.; John E. Donley, M.D.; Murray S. Danforth, M.D.; Roland Hammond, M.D.; Albert H. Miller, M.D.

Visiting Staff—Frank B. Berry, M.D.; F. Nolton Bigelow, M.D.; Roy Blosser, M.D.; William P. Buffum, M.D.; Alex M. Burgess, M.D.; Ber-

tram H. Buxton, M.D.; Harold G. Calder, M.D.; Edward S. Cameron, M.D.; Hilary J. Connor, M.D.; Anthony Corvese, M.D.; Frederic J. Farnell, M.D.; Henry J. Gallagher, M.D.; Nat H. Gifford, M.D.; Professor Frederic P. Gorham, Charles F. Gormly, M.D.; Prescott T. Hill, M.D.; J. Edwards Kerney, M.D.; James W. Leech, M.D.; Robert M. Lord, M.D.; Frank J. McCabe, M.D.; James A. McCann, M.D.; Edwards A. McLaughlin, M.D.; Parker Mills, M.D.; John T. Monahan, M.D.; William C. Muncy, M.D.; Michael J. Nestor, M.D.; Ira H. Noyes, M.D.; Walter C. Robertson, D.M.D.; Carl D. Sawyer, M.D.; George T. Spicer, M.D.; Eric P. Stone, M.D.; Henry E. Utter, M.D.; John G. Walsh, M.D.; Elliott Washburn, M.D.; Pearl Williams, M.D.; Elihu S. Wing, M.D.; William C. McLaughlin, M.D.

The Memorial Hospital.

Meeting of the Memorial Hospital Staff held January 2, 1923. Meeting called at 9:15 P. M. Large attendance. The minutes of the last meeting were read and approved.

An interesting case of a large ovarian cyst containing hair, with a piece of jaw bone with teeth attached, was presented by Drs. Towle and Jones.

Presented by Dr. Sweet of the medical staff, case of portal trombosis with apparent recovery. Several interesting cases were presented by Dr. Hammond.

The committee on rules for internes presented their report. The meeting adjourned at 10:15 P. M. The next meeting will be held February 6th, Tuesday evening.

John F. Kenney, M.D., *Secretary*

St. Joseph's Hospital.
Dr. Chapman

At the monthly Staff Association meeting on Friday, January 12, 1923, it was voted to inaugurate new procedures for the monthly meetings. The first portion of the meeting will be in sections, the Surgical, comprising the surgical, obstetrical and gynecological services; the Medical, comprising the medical, skin and children's departments; and the Eye, Ear, Nose and Throat section. Cases of interest of both regular and private services will be discussed. The second part of the meeting will be for all departments and a prepared paper will be read and discussed. The meetings will be held on the second Friday of each month and all members of both regular and consulting staffs are expected to attend.

The Hospital announces the acquisition of a new ambulance and service therewith, surely a very important step in the history of the Hospital.

The regular monthly meeting of the Staff Association of St. Joseph's Hospital was held on Friday, February 9, 1923. Cases were reported and discussed as follows: By Dr. Harris—A case of amputation of the arm for advanced sepsis; Laparotomy and radium treatment for uterine fibroid; A case of acute renal suppression; A case of pulmonary hemorrhage following ovariotomy; A case of multiple abscess of the kidney; Perforated duodenal ulcer. By Dr. McEvoy—A case of malignant ovarian cyst. By Dr. Beckett—A case of strangulated umbilical hernia. By Dr. Gordon—A case of encephalitis lethargica. By Dr. Jordan—A case of acute lymphatic leukemia in a child 6 years old; A case of Still's disease in a child 2½ years old; Acute endocarditis, acute lobar pneumonia with sarcoma of the kidney. By Dr. Ward—General arteriosclerosis. By Dr. Monahan—Acute rheumatic endocarditis.

(*Concluded from Page 42*)

of most of the throats immediately shows a positive indication for surgery. This is true of private office work as well as public clinic work. The tonsils are literally reeking with pus. Any throat surgeon will agree with this statement. However, we see, also in large numbers, certain throats which exhibit simply an exuberant hypertrophy of lymphoid tissue, and it is this type of case that should have many other therapeutic measures tried before surgery is recommended. The selection of these cases for X-ray, dietary and allied measures should, however, be left to the throat surgeon. It is incontrovertible that the man who looks into forty throats a day is better qualified to select these cases than his colleague who averages, perhaps, four a day and knows not what he sees when he looks over these four mouths.

Study of results of surgery in undernourished children, in cardiac disease, in joint disease, in tuberculosis and disease of the ears and of the cervical glands, as published by health authorities and by societies for the prevention of cardiac dis-

orders and tuberculosis, give decidedly incriminating evidence of the guilt of the sepsis bearing lymphatic and dental organs of the upper respiratory tract. These studies, systematically carried on for the past twenty years or more, have demonstrated the unfailing value of surgical procedure in the correction and prevention of the disorders enumerated. As samples, we find that the incidence of cardiac disorders has been reduced sixty per cent since 1901.

Surgical removal of diseased cervical glands has been reduced twenty per cent. And nutritional and general physical measurements as shown in school children who have been subject to dental, tonsil and adenoid surgery, give amazing results, visible and statistical.

All experimental work along this line has been worn thread-bare, but is immensely flattering to the exponent of surgery. A slight ripple of backfire occasionally creeps in from the X-ray specialist, the dietetic faddist or other hopeful radical, but these events are not significant.

MISCELLANEOUS

FISKE FUND PRIZE ESSAY.

The Trustees of the Fiske Fund, at the annual meeting of the Rhode Island Medical Society, held May 26, 1922, announced that they propose the following subject for the year 1923: "Has Surgery Lessened the Mortality of Cancer?"

For the best essay on this subject worthy of a premium, they offer the sum of two hundred and fifty dollars ($250).

Every competitor for a premium is expected to conform to the following regulations, namely:

To forward to the Secretary of the Trustees on or before the first day of May of the year for which the prize is offered, free of all expense, a copy of his dissertation, with a motto written thereon, and also accompanying it a sealed packet having the same motto inscribed on the outside, and his name and place of residence within.

Previously to receiving the premium awarded, the author of the successful dissertation must transfer to the Trustees all his right, title, and interest in and to the same, for the use, benefit and behoof of the Fiske Fund.

Letters accompanying the unsuccessful dissertations will be destroyed by the Trustees unopened; and the dissertations may be procured by their respective authors if applications be made therefor within three months.

The essays must be typewritten.

FRANK E. PECKHAM, M.D., Providence,
ARTHUR T. JONES, M.D., Providence,
WILLIAM F. BARRY, M.D., Woonsocket,
Trustees.

HALSEY DEWOLFE, M.D., 305 Brook St., Providence, Secretary to the Trustees.

"IF THE CAP FITS, PUT IT ON."
(Did you know it was CANCER?)

The attempt is being made to teach the layman to consult a physician at the earliest moment when there is any symptom or sign which might suggest a developing cancer. At a meeting of the Cancer Committee the following incidents were related:

1st. A woman last March noticed a lump in her breast and immediately consulted a local physician. He assured her that it was of no consequence and that she need not be disturbed about it. She returned home and waited until May and then consulted another physician, who also told her not to be disturbed about it and advised no treatment. This lump was a cancer and when she was finally seen in June by a third physician there were metastases in the axilla. She was sent to a surgeon and operated on immediately.

2nd. A man was sent into the hospital for diagnosis after having been treated for three months for haemorrhoids, NO EXAMINATION HAVING BEEN MADE. He had extensive cancer of the rectum.

3rd. A woman was treated for six months for nearly continuous flowing and told that her trouble was "change of life." NO EXAMINATION WAS MADE. She was examined by another physician and found to have far advanced cancer of the cervix.

Surgeons who are continually operating on cancerous conditions can tell of many such experiences. "Early diagnosis" is the slogan for the successful treatment of cancer. It is of no use to educate the public to consult a physician if the physician fails to give good service. In the cases above mentioned the patients' chances for cure were very much diminished, while the standing of their physicians suffered irreparably.

A CASE OF DOUBLE VAGINA AND DOUBLE CERVIX.

LEON WILLET HYDE, M.D.
HILLSBORO, ORE.

During the year 1915, a young woman consulted me with regard to her condition in view of prospective matrimony. She said that she had never suffered any at the menstrual peroid, but that at times the flow was scanty. Sometimes the menstrual flow would stop and be followed a few days later by a similar flow. On examination, the vagina was found so small that it was impossible to make a digital exploration. At the fourchette a distinct septum could be felt. This was firm and manifestly formed the central separation of two vaginae. I informed the patient of the condition, and recommended operation. This was delayed for about two months, at which time I removed a complete vaginal septum which, except for size, was characteristic of the vaginal wall in appearance. Using a good sized speculum, I examined the os. Instead of a single os there were two distinct and well formed ora. Except for being small, both vagina and ora were perfect. After painting the cartilaginous bases, left as a result of the removal of the septum, with iodin, I packed the vagina with gauze and put the patient back to bed. Recovery was uneventful.

In about six months this woman was married and moved to Portland. I requested that, should she become pregnant, she ask her physician to let me know. This she did. The physician, getting the report of the case from me, was interested in the outcome of her pregnancy. In due time he reported the birth of a healthy and normal child. In view of the report of Dr. H. G. Steele[1] of Bluefield, W. Va., I felt that this report would be of interest.—*Journal of the A. M. A.*

BOOK REVIEWS

"PHYSICAL DIAGNOSIS."

BY W. D. ROSE, M.D.
C. V. Mosby Co., 1922.

There is no paucity of good books on the broad subject, "Physical Diagnosis." The appearance of a 1922 book should have unusual features to merit particular attention. This volume consists very largely of a very good exposition of the *rationale* of physical conditions of the thorax and as such is to be heartily recommended. The seeker for the interpretation of physical findings, as well as one who wishes to refresh his recollection, will find that close association of pathology with physical signs so desirable now as ever. The treatment of other branches is not as full nor as satisfactory. Laboratory methods are but little discussed and the tremendous importance of their application rarely noted. The illustrations are taken largely from other works and many of them are very bad indeed, a thing absolutely inexcusable in these days of perfect photography and fine printing.

ELEMENTS OF SCIENTIFIC PSYCHOLOGY.

BY KNIGHT DUNLAP,
Professor of Experimental Psychology in Johns Hopkins University.
Published by C. V. Mosby Co., St. Louis, 1922.

Dr. Dunlap's book, entitled, "Elements of Scientific Psychology," published this year, is a great addition to the pyschological literature published by American authors. It embodies the very latest results of psychological research and is a splendid example of the recent trend of psychological study which demands scientific investigation of all its problems.

All of the early chapters of this book are exceedingly well done; worthy of especial note are the chapters on the somatic, visceral, and labyrinthine senses, that on sensory measurements, and also the one on instinct and habit. In the first of these, we have a wonderfully clear and accurate description of all the latest work that has been done on the sensations, and it illustrates the very great development of psychological investigation in the last few years. Dr. Dunlap has approached his problem with an open mind, and has controlled all his work with laboratory data; and at the end of this chapter he states, "Without doubt there are a great number of bodily feelings for which we have no names and concerning whose conditions we know little. Observation of them is exceedingly difficult, on account of our lack of control." This quotation is a good example of the truly investigative viewpoint of the author. The chapter

[1]Steele, H. G.: A Case of Vaginal Septum and Bicornate Uterus, J. A. M. A. 75:309 (July 31) 1920.

entitled, "Some Sensory Measurements," is another careful record of laboratory data which is carefully put together and very readable. The chapter on "Instinct and Habit" refers to the various lists of the instincts by different authors; and it very wisely states that, "The more useful course is to consider instinctive reactions psychologically—that is, as definite reactions to definite stimuli—and in connection with the desires and other emotional states of the animal which reacts." In this chapter also is found a summary of the principles or laws of learning, and these laws are worthy of a careful study by many of our educators.

It should never be the function of a reviewer to agree with everything set before them; and in this case the criticism made is with Appendix I, which deals with "Mental Deficiency and Mental Disease." Dr. Dunlap explains the inclusion of this appendix by saying that it is important that the student of general psychology should have some conception of the nature of the diseases and deficiencies which are most commonly distributed, since he necessarily will meet with references to the names of these conditions, even if he does not study abnormal psychology. With this statement, we cannot but agree; but with many of the statements about mental disease we should take issue. For example, modern experience with general paresis hardly leads us to the conclusion that the disease ends in two or three years in the death of the patient; and again, in speaking of paranoia, there would be but few psychiatrists today who could subscribe to the statement that in this disease there are highly systematized delusions—characteristically of persecution and grandeur—but with no other mental deterioration. Under this heading of "Mental Deficiency and Mental Diseases," there are other rather out-of-date descriptions of mental disease, but psychiatry is changing its nomenclature and its clinical entities so rapidly of late that it may be straining a point to take issue with slight inaccuracies as above noted. Only, in a book so thoroughly the last word in psychological laboratory study, one cannot but wish that the attempts at description of mental states had been handled under the Appendix of Reference Books, rather than by a place of its own between these covers.

HUMAN HEREDITY.

By Casper L. Redfield.

Heredity Publishing Company,
Chicago, Ill.

This small volume is evidently intended to persuade the reader of the truth of the general proposition that in human beings acquired characteristics are freely transmitted by parents to offspring and that the older the parents the more well equipped will their offspring necessarily be because of their greater opportunity to inherit the mental characteristics which their parents by reason of their maturity have acquired. As a scientific treatise the book does not deserve attention. In places, the manner in which the author refers to those who, he feels, are likely to disagree with his conclusions savors overmuch of the crank who believes the whole world totally and maliciously blind to his pet idea. The book is not to be recommended.

THE LIFE OF JACOB HENLE.

By Victor Robinson, M.D.

Medical Life Company.

Upon the paper cover of this little book one reads "The first biography in the English language of one of the makers of modern medicine. Edition limited to five hundred copies." Having read the book, one looks forward eagerly for the appearance of a second biography by Dr. Robinson and wishes that the present edition were not limited. The clear narrative of the main incidents of Henle's life, his problems and his achievements, and the clever interweaving of a background of personal anecdote, marks the author as a master of biographical writing. The book can be highly recommended.

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ORIGINAL ARTICLES

ATROPHIC ARTHRITIS.*

By Loring T. Swaim, M.D.
Boston, Mass.

A great deal of confusion about arthritis in general is due to the nomenclature. The English speak of chronic rheumatism, rheumatoid arthritis and osteo-arthritis. Goldthwait, Painter and Osgood call them infectious, atrophic and hypertrophic. Nichols and Richardson placed the first two in the proliferative and the last in the degenerative type, referring, primarily, to the soft tissue changes.

This difference in terms is at first confusing but the general opinion seems to be that there are at least two main groups of non-tubercular joint diseases, with the question still unanswered as to whether infectious arthritis or atrophic shall be placed together or separately, making three distinct types.

In speaking tonight I shall use the infectious, atrophic and hypertrophic classification and shall devote myself largely to the atrophic group, which is the most common and most crippling of them all.

Infectious means due to infection. It is a name based on the cause and should not be used in the same classification with atrophic and hypertrophic, which are terms of pathological findings. However, unless we use some pathological terms as periarticular inflammation, we have no way of presenting the picture of the disease other than by the term "infectious."

The (so-called) infectious group has its source, most writers believe, in the alimentary tract; the tonsils, teeth, sinuses, gall bladder or appendix, etc. Our experience has been that the large majority of such cases are intestinal, the source being caecal colitis due to stasis and putrification of old material in the colon.

This type occurs at all ages; in children it is called "Still's Disease," with the swollen joints, enlarged liver and spleen. In later life it is the periarticular arthritis where no bone changes are seen. The symptoms are either those of acute inflammation about a joint and tendons leading to the capsule, or those of low-grade chronic irritation of the tissues bathed by synovial fluid in and about the joints. Many of these recover without assistance and the prognosis is good if the cause of the toxaemia can be eliminated and the general resistance raised by careful building up of the general functional capacity of the patient. I will refer to this more fully later, under "Treatment."

There has been too much importance attached to the tonsils and teeth, with too little study of the gastro-intestinal functions as manifested by distended bowels, gas, foul stools and mucous.

To return to the atrophic arthritis, some feel that it is a metabolic disease resulting in certain bio-chemical alterations causing changes to take place in the bone directly beneath the cartilage, and has no infectious origin.

For several years it has been increasingly demonstrated by the improved X-rays that this atrophic form has been overlooked or misnamed in many cases, while, in reality, it is the most common type.

It seems to be a disease of all ages but is most active frequently in early and middle life, that is, between the ages of twenty and forty. It occurs more often in women than in men, and unless the destructive atrophy of the bone is arrested, produces complete bony ankylosis of the joint. The progress may be surprisingly rapid or correspondingly slow, apparently depending on the general vitality of the patient, and the profoundness of the physiological disturbance.

The pathology begins with joint swelling, is shortly followed by soft tissue proliferation, destruction of the cartilage and removal of bone salts from the whole of the bones, especially the ends, leaving irregular bone surfaces at the joint lines.

A study of X-rays shows a rarefaction of the bone ends which takes place very early and may progress with or without any active inflammatory reaction in the soft tissues.

*Read before the Providence County Medical Society January 1, 1923.

In considering the etiology of atrophic arthritis, one naturally turns to the problem of focal infection. In some, a focus is found in the teeth, tonsils, sinuses or intestines; in others, in spite of the most painstaking search, no focus can be located. Furthermore, in spite of the removal of a focus of infection, improvement very frequently does not occur. From this it would seem that the disease is a more complicated process than simple infection. It is a metabolic disturbance causing certain definite chemical processes to take place in and around the joints. This reaction causes proliferation of soft parts and atrophy of the bone and cartilage, the nutrition of the bone being so affected that calcium salts are either not laid down or are destroyed and removed. The progress of this gradual eating away of the joint and bone ends is shown in the X-rays only. The shortening of the bone is clinically seen in the stubby loose-jointed fingers with the bulbous, spindle-shaped swelling. There is an apparent enlargement of the joint edges much like those felt in hypertrophic arthritis. However, the X-rays show only a widening of the joint area due to mushrooming of the soft bone ends. Therefore X-rays are necessary in order to arrive at a true diagnosis of the type of the disease and its progress.

It would seem then that hypertrophic and atrophic arthritis are directly the opposite of each other clinically and probably metabolically. Both progress very slowly and are usually afebrile. If these are both due to an infection, it produces diametrically opposite metabolic and chemical reactions.

It is perfectly reasonable, and in fact probable, that any local focus of infection such as the tonsils, will disturb the metabolic balance enough to cause joint symptoms but, from clinical observation, it seems that the focal infection is not the direct cause of the joint changes. If it has any effect, it is as a disturbing agent.

There are recorded spontaneous cures and recovery in the face of infections, which give weight to this belief. A further point in favor of metabolic, rather than infectious origin, lies in the failure to find bacteria in these joints. This metabolic disturbance is not as yet understood, the chemistry has not been worked out sufficiently to warrant any scientific statement of facts. We are, therefore, thrown back upon clinical observations.

In studying the atrophic arthritis, the following clinical observations have been found so often that it seems justifiable to draw your attention to them.

In carefully taken histories, one almost invariably finds long continued physical or nervous strain of some kind has preceded the onset of joint symptoms. Continued worry, disappointment, home difficulties and grief, all disturb the physiological balance, particularly of the internal glandular system, and cause digestive disturbances, as shown by Cannon.

The earliest symptom frequently complained of is a "numbness" of the fingers. By this the patient means an actual blanching, which extends over the ends of one or several fingers. The fingers are cold to touch, pale, without the normal response of the blood supply to pressure. The nail even is white. This phenomena of the blood supply occurs irregularly; at any time in the day, is not associated with cold, but may occur in midsummer, during exercise, or at night in bed. After varying periods it is relieved by heat or massage or may as suddenly disappear of itself.

This vaso-motor disturbance occurs during times of nervous tension, in most of the cases observed, and is usually absent after the process of atrophy is well started; consequently, unless asked for, it is often overlooked by the patient.

It is unmistakably a local vaso-motor disturbance, which, it does not seem far-fetched to infer, may affect the nutrition of the joints if repeated frequently enough. It is interesting to note that the finger affected is quite commonly stiff during the vaso-motor spasm.

The clinical results of a repeated anæmia of this kind is not known, but that the same atrophic changes have been observed in the bones in arteriosclerosis, has been proved by X-rays, showing the calcified artery and the patches of bone atrophy. The inference is strongly in favor of poor nutrition to the joint resulting in atrophy because the extremities are more frequently affected than the large joints which have better circulation.

Atrophic arthritis is most frequently found in a certain build of patient, the slender bodied, light boned, willowy type, or those approximately this build, as opposed to the heavy, massive boned type, who show more of the hypertrophic changes. This type is nervous, high strung, is apt to worry and has a sensitive internal glandular system. They

are subject to rapid vasomotor changes and are also subject to cold hands and feet, and are functionally unstable.

With a few exceptions, these cases have low systolic blood pressures, 105 to 120, with a low pulse pressure ranging from 15 to 30. The hypertrophic cases have a higher blood pressure.

This low pressure is associated with a subnormal temperature.

Both these observations suggest lowered vitality. They are easily fatigued.

It has been observed that, as the blood pressure and temperature regained normal limits, the vasomotor phenomena decreased and the bone changes in several cases apparently were arrested. The internal balance was restored.

Another clinical observation has seemed of significance, that is the acid tongue. It has been found that the cases of atrophic arthritis had clean, shiny, wet tongues, which gave an acid reaction to litmus paper. It was also observed that, as the acidity of the tongue decreased, the swelling of the joints decreased. What this acid mouth means is not known. The saliva should be alkaline. Dr. Walter Miner has verified this in a large series of dental cases reporting that they are, with only a few exceptions, alkaline.

The slender people have this tendency to acidity more frequently than the heavy group. It may mean nothing, and it may mean a general acidity of the mucous membrane secretions. It has raised a question of a general low grade acidosis not demonstrable by blood tests as yet.

In reference to this, two cases were found to have acetone in the urine during exacerbations of the arthritis.

The acid mouth is not the result of decayed food, unclean teeth or pyorrhea, as it is found in exceptionally well cared for mouths. It is not associated with meals. It is interesting to note that soda bicarbonate decreases the joint pain and the acid tongue, if given in sufficient dosage.

In atrophic arthritis one frequently finds general atrophic changes in the skin, hair, finger-nails and muscles. The gums are spongy and the teeth decay easily. The mouth resembles that of a scurvy patient. These cases are very soft muscled and thin-skinned. The skin is dry and does not perspire and, as Dr. Wilde of Bath, England, has shown, the sweat of these patients is always acid and remains so even after many days of induced sweating. He believes the chronic rheumatism and atrophic cases are a low-grade acidosis, due to the failure of the normal function of the skin in eliminating lactic acid, the loss of the lime salts being due to their need as neutralizers of this accumulated acid. Phosphate of lime has a great affinity for lactic acid.

He has devised a method of low temperature, moist steam sweats, never over 105°, which can be carried on daily for 60 days or more without fatigue or depletion. Last summer he demonstrated his results to me. They were very convincing.

So far, clearly, it would seem as if we were dealing with a disease which profoundly affected the whole body, as is not seen in either the infectious periarticular or the hypertrophic type.

Very little has been said about hypertrophic arthritis because you are all familiar with the X-ray findings of proliferation in spurs, following the capsular or tendonous attachments about joints. It chiefly is found in the heavy-boned types of people at points of strain and usually gives no symptoms other than those due to mechanical interference, to pressure soreness and irritation. Extensive spurs may be found without any symptoms at all.

Atrophic arthritis suggests a bio-chemical disturbance, whether due to one of three causes or all, we do not as yet know. First, insufficient diet, as suggested by the work of Dr. Percy Howe, on the effect of deficiency diets on the teeth and jaws of guinea pigs and monkeys, or, second, to the excessive accumulation of acid in the lymph spaces, which uses up the mineral salts necessary to bones and muscles: or, third, due to some failure of the body to use these mineral salts through a malfunctioning of the gastro-intestinal tract or the glandular system. As yet, we do not know, all three may be present in any case. My belief is that atrophic arthritis is a metabolic disturbance of this kind and will be explained when we know more of the internal glandular secretions and the chemistry of sweat. Research along these lines is being carried out.

If this is so, then it behooves us to differentiate the types of arthritis in any reports we may publish. It is clear that all data loses much of its value when no attempt is made to classify the

types with the laboratory, pathological, clinical observations and treatment. It is to be regretted that X-ray diagnosis is not usually used in all cases, as it is the only way we have of making a diagnosis of the bone changes present. It is disappointing that much of the careful laboratory work has not been done with the cases classified in types. It would, undoubtedly, be much more valuable.

Again, treatment depends upon the type of disease. The toxic case is elimination, that is, removal of the focus of infection, clearing the intestines, prevention of toxaemia through diet. Correction of bowel drainage, etc. The atrophic case needs building up. First and foremost, better physiology. This, in our experience, depends upon body mechanics; correct use of the chest, diaphragm, and space for the abdominal organs to work normally in. All this is accomplished through corrective posture work, rest positions and exercise.

Better chemistry is secured through care in selection of the base-forming mineral salt foods, such as fruits, green, fresh vegetables, whole grains, milk and eggs, avoiding acid-forming foods, such as excessive meat, white flour, sugars and degerminated grains. But foremost I place the correct body mechanics to prepare the body to handle the foods. The better elimination and neutralization of acid can be hastened, not only by base-forming foods, but by alkalines and, lastly, by Dr. Wilde's method of skin elimination, which increases the metabolism of every cell in the body. Depletion by dieting, over-exercise and elimination is dangerous in these cases. They should be aided to build up in every way, by frequent rests, carefully directed body exercise, sun, fresh air, food, and freedom from worry and care. They are long, hard cases, but, with proper supervision, they can be helped and restored to some degree of usefulness, although regeneration of the damaged bones cannot be hoped for in our present state of inexact knowledge. However, the disease can be arrested and has been in many cases.

Discussion.

Dr. Danforth:

I think we are very indebted to Dr. Swaim for talking on such a subject, a subject in which we are all very much interested because we all see these cases and worry about them; they don't get better and they wander from one doctor to another. I think that the points which Dr. Swaim has brought out and the points which have been of great help to me have been that in the last two years I have learned a little about dividing the types. I know there was a great feeling that tonsils and teeth were responsible for various conditions and played a very important part, and every once in a while some focal infection cleared and the patient got better. Very many times the foci cleared up without any effect upon the joint disturbance.

Aside from learning very gradually and very poorly a little about separating the different types of arthritis, there is one other thing that has helped me. That was the attempt to get the body of the patient into good condition so that the patient might be nearly normal by improving in every possible way his nutrition, as in a great many instances patients were not too well nourished. I feel that this has helped me more than any other thing, in treating some of these very special conditions.

I hoped that Dr. Swaim might say what he felt about the use of gland substances in the treatment of some of these cases. Would it seem to be of help in restoring their normal physiology?

Also, I wish to say a little about what help, if any, blood chemistry is in trying to learn something about these conditions—what help it is in a practical way in treating these conditions. I have been having more or less chemistry of the blood studied in the hospital, and many times find that they are not far from normal. Is there anything which may show any light on this?

Dr. Mathews:

I know you have profited by this talk by Dr. Swaim. I had the pleasure of hearing him some three or four weeks ago at the Massachusetts General Hospital, before a small number of medical men. That, to me, was as eye-opening as anything I have ever heard. I had not heard much of Dr. Wilde, but the work that Dr. Swaim saw and which he dilated on was to me a matter of tremendous interest.

The medical man sees probably more arthritis cases than most any other line of work; not only because the cases are numerous but because they come so often and go away apparently no better.

Some of these cases develop into chronic and bone changes occur. With it all, so far there has not been much new information, and Dr. Wilde's ideas will be a great help.

In the past, I remember, in my early practice, we used salicylates, etc. Apropos of this, I thought you might be interested in hearing how it is said that salicylates originated. It seems that there was a very strong feeling, more in England, to the effect that "what the Lord gave, the Lord would take away," providing a remedy for the illness; for instance, if the Lord had given malaria, He had also given the tree from which quinine is obtained. For patients suffering from rheumatism which God had sent, He had also provided a remedy. He looked about; finally there was a tree called the willow (or willow tree). From that he got his salicylates, and that is how salicylates originated.

I will not try to cross-examine Dr. Swaim, but I would like to ask a few questions. In the first place, regarding the rheumatic fever, whether that is occasionally the rheumatoid infection? I would like to ask, also, whether basal metabolism is low in most cases. Whether there is a high blood sugar in these cases or whether this has any effect? Also, what faith, if any, Dr. Swaim has in physiotherapy in the treatment of these very obstinate cases?

Dr. Hammond:

I think you must all have been impressed that you have listened to a very clear exposition of the modern ideas on arthritis and a very sane manner of treatment by Dr. Swaim. Personally, I want to thank him especially for confirming some ideas which I have. I think the most prominent one of those would be the subject of focal infection. There has been so much damage done to these people with crippled joints by the wholesale removal of tonsils and teeth that it is time that more than one voice were raised in protest. Dr. Swaim spoke of setting his interest largely in the atrophic type and described clearly that type of arthritis. I have been impressed in treating those people as to what delicate creatures they are. They don't stand very much and they should not be submitted to much in the way of operation or vigorous treatment.

In the Nose and Throat Service at Johns Hopkins several years ago, the surgeons there found that the removal of tonsils in the atrophic type was a major operation and, furthermore, they found that those people did very badly under operation.

The work of the Englishman who finds that low temperature produces better results than high bears out the idea that these people should be treated carefully. These people think the stronger the medicine that you take, the better. I believe that I hardly ever tell a person to put his foot in hot water "as hot as you can bear it."

I think Dr. Swaim's ideas of diet are very sound. Many patients come in under-nourished, and meat is their first requisite in building up, and it is always the type which needs to be fed up which has been starved previously.

I have found that to deprive patients of sugar that they suffered from the lack of it and the minute they were put back on the sugar they immediately came up again.

I believe that our greatest hope in the treatment of these conditions lies in physio-therapy largely applied. Too often patients go to sanitariums or baths for a limited period of time, receive vigorous treatment and come home exhausted. Bathing or electricity—whatever method you choose—but those methods must be employed with the needs and requirements of each individual patient in mind, and I believe that more harm is done usually by too vigorous treatment than by the opposite.

Again I thank Dr. Swaim for his very interesting paper.

THE SCHICK TEST AND TOXIN ANTITOXIN IMMUNIZATION.*

By Hillary J. Connor.
Providence, R. I.

Toxin antitoxin immunization has been carried on about nine years. Von Behring, with the assistance of Theobald Smith, in 1912 perfected a method of immunization which was given to the medical profession in 1913.

Beginning in 1916, an extensive campaign has been carried on in the schools of New York City under the direction of William M. Park, who has given us most of our information concerning this treatment.

*Read before the Providence Medical Association, Dec. 4, 1922.

At about the same time as discovery of toxin antitoxin immunity in human beings, Von Schick in 1913 gave a test to the medical profession which gave definite evidence whether a person was immune or non-immune to diphtheria.

This test is done as follows:

In right forearm unheated diphtheria toxin is injected intracutaneously, while in left forearm toxin which has been heated to 75° C. for ten minutes is injected in a similar manner. This heating destroys the soluble toxin, but affects very slightly the protein of the diphtheria bacillus.

Thus we have the toxin alone injected in right arm, while the protein contents in equal amounts is injected in both arms.

The test is read as follows:

Positive, a well pronounced red area on right forearm, with nothing on left.

Negative, no red area on either arm.

Pseudo-negative, a brownish or reddish area equal in size on both arms, indicating a protein reaction.

Positive combined, a reddish or brownish area larger in size on right arm than left, indicating both a toxin and protein reaction.

The test is read with most certainty four days after injection.

The positive and positive combined reactions call for treatment with the immunizing mixture.

The negative and pseudo negative reactions indicate the individual has a natural immunity to diphtheria.

The necessity for control injection is shown by the fact that twenty-five to thirty per cent of the children tested in New York schools gave a negative pseudo reaction. Without the control test these would have been called positive.

These tests are read with greater accuracy as the physician grows more familiar with seeing them. The City Health Department would be glad to have any doctors interested attend some of the clinics and observe the work done.

At the present time there are several different laboratories putting the Schick test on the market. Not all of these are reliable. The outfit supplied by the New York City Department of Health is probably more reliable than most. This outfit consists of a glass capillary tube containing one and one-half M. L. dose of diphtheria toxin, a small rubber bulb for expelling toxin and a bottle containing 10 C. C. of saline. The dose is 3 minims of the solution or about 1/40 M. L. dose of diphtheria toxin. The outfit contains about 45 doses.

The five or ten test outfits supplied by some of the companies are probably unreliable, as diphtheria toxin is a very potent solution and the amount measured into capillary tubes for five tests would be very difficult to measure with accuracy.

Toxin antitoxin mixture: The dosage is 1 C. C. administered weekly for three injections. Each C. C. consists of 3 L. doses of toxin and 3½ units of antitoxin.

A L. dose of toxin is the smallest amount which will kill a guinea pig within four days. A unit of antitoxin is the amount of antitoxin which will protect a guinea pig, average size, against 100 times the fatal dose of toxin.

The standard of safety is maintained when 5 C. C. of this mixture, that is, five times the dose used in our treatment injected into a guinea pig, produces pronounced local induration with late paralysis, but not acute death.

All children from six months to six years of age should be given treatment, as nearly all children at this age are susceptible to diphtheria, as shown by the Schick test. Infants under six months of age usually inherit a maternal antitoxic immunity from the mother so they do not require treatment.

Children over five years of age are first tested for immunity, then if necessary are given toxin antitoxin injections.

The younger children, under five years, suffer very little inconvenience from injections, but the older ones often have red, swollen arms and occasionally temperature of from 100 to 103°. There are no after effects, however, the swelling usually disappearing in three or four days.

This is probably a protein reaction, as children having a positive combined Schick test are more apt to have swollen arms following toxin antitoxin injections than those with simple positive Schick. Also children under five years seldom give a protein reaction to Schick test. Reactions are largely due to the protein contents of the culture fluid and are not due to toxin as much. This is evident because the same reaction follows the injection of the control test where the toxin has been destroyed by heat.

The results of toxin antitoxin immunization

vary considerably among different classes of children but on an average about 80 per cent become immune after the three injections.

It has been found that the higher the per cent of positive Schicks in a school, the poorer, as a rule, is the response to the toxin antitoxin mixture; and the lower the per cent of positive Schicks the better the response to the toxin antitoxin mixture. In institutions where children are crowded together they have been found as low as 5 to 10 per cent positive, and 85 to 100 per cent of these respond to treatment.

This is explained by the fact that tissue cells of the positive reaction have been partly stimulated by exposure to diphtheria, as a result the large majority promptly become immune after injections of toxin antitoxin.

Children in the poorer neighborhoods, where they live crowded together, give much higher percentage of negative Schicks than the more well-to-do children. This can be explained by the fact that living close together they are repeatedly exposed to diphtheria and getting it in small doses not enough to produce sickness, gradually acquire an immunity. Also many develop an acute attack of diphtheria and others may be diphtheria carriers for a shorter or longer interval.

Some of our work done here in Providence illustrates this very clearly. The toxin antitoxin mixture requires from one to six months to produce immunity. Schick tests should be done six months after immunization and if still positive, second series of three injections given. Statistics show over ninety per cent of those immunized are immune for seven years and probably for life.

Anaphylaxis.

There are no cases on record of anaphylaxis out of several hundred thousand injections given. Rarely an urticarial rash occurs. I have seen one case of this kind which followed both the Schick and toxin antitoxin injection.

The amount of antitoxin given in each dose of toxin antitoxin, less than one drop, is so small that there is no danger, even in sensitive individuals.

A preliminary dose of antitoxin is no contraindication to giving toxin antitoxin, nor is there any danger in giving antitoxin following injections of toxin antitoxin.

As this mixture requires from one to six months to immunize the patient, it should not be given during an attack of diphtheria. Diphtheria antitoxin should be given instead.

The following is a short sketch of our work done here in Providence: About one year ago we opened a clinic at the Atwells Avenue Schoolhouse. Our chief aim was to immunize the younger children under school age. Several months later we opened clinics at the North End Dispensary, Point Street, and Esek Hopkins Schools. The attendance at first was very gratifying, but gradually fell off so that we felt impelled to close those clinics and are now concentrating on the school children, going from school to school.

We realize as the mortality from diphtheria is greater under five years of age, or before school age, it is of more importance to treat these children than the school children, but it is much more difficult to get hold of them.

Recently the teachers have been announcing to the children that we would be glad to have their mothers bring younger brothers and sisters for treatment and the response appears to be getting better every clinic.

We have not yet started re-Schicking the children already injected, so that I cannot give any data showing result of treatment.

I thought, however, it would be interesting to tabulate the results of the Schick tests in the different schools, and different sections of the city, showing the variations among different classes of children.

The following table shows the number of positive and negative Schicks among 1,952 children tested:

First: Six schools on Federal Hill.

Positive, or Susceptible to Diphtheria.		*Negative or Immune to Diphtheria.*	
America St.	14	America St.	46
Arthur Ave.	135	Arthur Ave.	313
Courtland St.	36	Courtland St.	66
Atwells Ave.	78	Atwells Ave.	157
Knight St.	52	Knight St.	88
Africa St.	18	Africa St.	34
Total	333	Total	704

About thirty-two per cent positive, most of these children were not over twelve years of age, and of Italian parentage.

Second: Three schools in Charles and Branch Avenue district.

Positive.		*Negative.*	
Old Branch Ave...	29	Old Branch Ave...	66
New Branch Ave..	43	New Branch Ave..102	
Esek Hopkins.....	52	Esek Hopkins.....186	
Total 124		Total 352	

These children also are mostly of Italian parentage. In Old Branch and New Branch Avenue, the children not over twelve years of age equal 30 per cent positive. At Esek Hopkins, with children up to seventeen years of age, 21 per cent were positive.

The percentage of positive at all these schools average quite close with the exception of Esek Hopkins, which is considerably less. This is to be expected, as percentage of positives should be lower among older children.

Third: Point Street School; 142 positive, 153 negative; 48 per cent positive.

This fairly high percentage in spite of older children, ages comparing with those at Esek Hopkins School. No predominating nationality.

Fourth: North End Dispensary; 20 positive, 49 negative; 29 per cent positive. Mostly Jewish children at this clinic.

Fifth: Althea Street School; 48 positive, 27 negative; 64 per cent positive.

This school had the highest percentage of positives and illustrates the effect living conditions have on the amount of susceptibility to diphtheria.

Comparing these children with those at Federal Hill, ages being about equal, percentage of positives here 64, is twice as high as percentage there of 32.

On an average, children at Federal Hill live under crowded conditions and are more likely to become immune from contact with other children. At Althea Street, on an average, the children live in better homes, more scattered, and are therefore more susceptible to diphtheria.

One more table will illustrate the degree of susceptibility at different ages. As one would expect, the younger the child the more susceptible to diphtheria.

Age.	Positive.	Negative.	Per Cent Positive.
6	99	107	.43
7	99	156	.38
8	93	181	.33
9	92	178	.33
10	102	211	.32
11	76	155	.32
12	57	139	.29
13	49	81	.37
14	8	63	.11
15	3	14	.17

This table shows a fairly consistent drop in percentage of positive cases as the age increases.

These figures were taken from a total of 1,952 Schick tests.

THE JOURNAL'S CALIFORNIA TRIP TO THE A.M.A. CONVENTION

(continued)

W. E. Musgrave, Chairman of the Committee of Arrangements, presents the following selective itinerary:

Trip No. 1, Twenty-one Days to Hawaii and Return.

This trip includes a visit of six days in Honolulu with sight-seeing trips to all parts of the city and on the Island of Oahu and two days in Hilo and the Kilauea National Park, with a visit by day and night to the famous active volcano of Kilauea National Park. This is the easiest volcano to visit in the world and it alone is worth the trip to the islands. This is the most beautiful time to visit Hawaii, as the flowering trees and shrubs are all in bloom, vying with each other in their profusion of bloom and riot of color. The cool trade winds continually fan your cheek and the nights are soft and balmy, while the water of the ocean ever invites you to revel in its warm embrace.

Trip No. 2, Twenty-four Day Cruise to Alaska.

Leaving San Francisco by boat or train for Seattle, where a day is spent in sightseeing, proceed from Seattle by boat through the inside passage (one of the most beautiful water trips in the world), calling at Ketchikan, Wrangell, Peters-

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RHODE ISLAND MEDICAL SOCIETY

Meets the first Thursday in September, December, March and June

FRANK E. PECKHAM	*President*	Providence
ARTHUR T. JONES	*1st Vice-President*	Providence
WM. F. BARRY	*2nd " "*	Woonsocket
JAMES W. LEECH	*Secretary*	Providence
J. E. MOWRY	*Treasurer*	Providence

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Meets the second Thursday in each month

G. HOUSTON	*President*	Arctic
C. S. CHRISTIE	*Secretary*	Riverpoint

NEWPORT

Meets the third Thursday in each month

NORMAN M. MACLEOD	*President*	Newport
ALEXANDER C. SANFORD	*Secretary*	Newport

PAWTUCKET

Meets the third Thursday in each month excepting July and August

STANLEY SPRAGUE	*President*	Pawtucket
GEORGE E. RONNE	*Secretary*	Pawtucket

PROVIDENCE

Meets the first Monday in each month excepting July, August and September

WILLIAM B. CUTTS	*President*	Providence
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Meets the second Thursday in January, April, July and October

JOHN E. RUISI	*President*	Ashaway
WM. A. HILLARD	*Secretary*	Westerly

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Meets the second Thursday in each month excepting July and August

A. A. WEEDEN	*President*	Woonsocket
THOMAS S. FLYNN	*Secretary*	Woonsocket

Section on Medicine—4th Tuesday in each month, Dr. Charles A. McDonald, Chairman; Dr. C. W. Skelton, Secretary and Treasurer.

R. I. Ophthalmological and Otological Society—2d Thursday—October, December, February, April and Annual at call of President Dr. H. E. Blanchard, President; Dr. Jeffrey J. Walsh, Secretary-Treasurer.

The R. I. Medico-Legal Society—Last Thursday—January, April, June and October. James B. Littlefield, Esq., President; Dr. Jacob S. Kelley, Secretary-Treasurer.

EDITORIALS

WHAT IS THE PRACTICE OF MEDICINE?

One cannot but be impressed by the ever increasing list of medical cults, whose bold claims of almost miraculous cures would seem to demand recognition.

To average citizens, including State legislators, must come the thought that the prerequisite standard of education and training of medical practitioners is either reasonably high or unnecessarily high. It is inconceivable that any sane person would argue that the required standard is too high.

From time immemorial, the medical profession has earnestly striven to extend its knowledge and to improve its armamentarium in order to relieve human ills. Wonderful progress has been made, especially during the last fifty years, so that now, persons afflicted with disease receive more skillful treatment than ever before. In spite of this, however, medical parasites seasonally appear and, by clever, even though false and ridiculous, advertising, they impress the laity, most of whom have no way of appraising either the value or the worthlessness of these claims. The perpetrators of these so-called systems of treatment have practically no

knowledge of human anatomy, physiology, pathology, etc., and yet they blatantly deny the existence of fundamental and well established facts. It is not surprising that the laity accept as true these bogus claims, because no refutation of them has been forthcoming from medical sources.

Psychologists tell us that, stored away in our subconscious minds, is the overpowering desire for health and happiness. This state of mind explains the cause of the great impression made by the alluring promises of all medical charlatans.

It is time for the medical profession to abandon its hoary attitude of silent dignity and come forth to do its full duty in preserving the health of the community by properly informing the public on matters pertaining to health. Several methods of procedure might be suggested, but the free public lecture at intervals, properly advertised and conducted under the auspices of the State medical society, would, we are certain, make a strong appeal. In this way a fair and just presentation of medical facts and theories could be made and the absurdity of the claims of medical parasites could be shown.

HYGEIA.

The first issue of *Hygeia* will appear in April. While this new journal, its purpose and scope, is known to all the readers of the *American Medical Journal,* it is certainly important that all local medical associations sustain the National Association in making of this journal a success.

The American Medical Association has not for a long time, if it ever did, undertake anything of as much potential value to the country as the publication of a popular medical magazine. Some worthy efforts to enlighten the public truthfully of what is known about disease, methods of prevention and treatment, has been undertaken by a few newspapers and magazines, public health bulletins of the United States Public Health Service, various city and State health departments and other official and non-official associations of good standing. On the other hand, these efforts have been feeble, compared with the money and energy expended on propaganda put out by commercial houses which deal in medical supplies. To say nothing of printed advertisements, these houses detail men who spend all their time trying to persuade physicians and druggists that this, that, or the other remedy is the greatest thing in the world. The patent medicine of former days still flourishes as it never flourished before, and even so-called legitimate houses are expanding their business by inventing new chemicals and new names, even to deceive the physician. But this is not all. New kinds of healers, Coue, Dr. Palmer's cult and a host of others are constantly before the public, showing their wares so that even those in the remotest hamlets know of them and their pretensions.

And lastly, within a few years there has sprung up about the modern health movement also a host of men and women who have by education or experience obtained a smattering of knowledge of the details of the methods of the prevention of disease, and who are posing as health experts and advising measures of doubtful value or even fraudulent character sometimes for their own private gain. Most people who have come from country homes remember that almost all of them possessed "a doctor's book" usually written by some man to sell and with little thought as to its accuracy. It is not easy to get a physician in the country and unfortunately the ability of country practitioners is made below the best in cities and such a book filled a certain need. This journal, *Hygeia,* will enlighten country people on the real status of treatment and prevention of disease, taking to a large extent the place of the popular medical books, and force the country practitioners to render a better grade of service.

This new journal, if it does all that it is intended to do, will aim to tell the truth about health matters just so far as they are actually known. There is no ulterior motive in its publication. It proposes to tell scientific truths about disease in simple and understandable language.

This magazine should go into every home and it is hoped and believed that it will counteract false propaganda which has for its object the extraction of every dollar possible from the public regardless of what it gives in return. As physicians, we ought to subscribe to it, at least temporarily, and if it proves to be what is hoped, we should urge its introduction into the home wherever we can.

LAY MEDICINE.

Every faith, cult, system of thought, institution of learning or systematized organization wanes in the success of its activities and undergoes retrograde changes unless protected from those influences which make for lessened efficiency and intrinsic worth. Organized religion finds it necessary to adopt measures varying with the needs of the time to preserve the purity of its doctrines and prevent their overthrow or obliteration by the inroads of heresy and schism. The dominant thoughts of national character and politics, unless kept fresh by frequent review and the recollection of salient factors and lessons learned by history soon change and are perverted into the means of anarchy with resulting harm to peoples and the lowering of the social level of posterity. So also does the torch of true learning become uncertain in its light as a guiding beacon, its bright, clear flame, smoky and dim, will no longer be accepted by peoples as their star of hope in matters medical and hygienic, if it is no longer fed with the fuel of sound, sensible and sane thought and the hand that holds it strong, firm and unshaking.

The torch of scientific medicine, thanks to the combined efforts of many, if not all branches of science, has risen from a murky fog of secrecy, doubt, nostrums and uncertainty and made clear the way for the solution of medical problems which with ever increasing knowledge have multiplied many fold until our information on many medical subjects is quite complete and satisfying. Until within a very few years it has seemed that the medical profession was not only the custodian of knowledge of matters medical but also the means of putting into practice the means of prevention and cure of disease. It was furthermore closely associated with allied subjects, all of which insured its position as a competent adviser of individuals and peoples, and made it as great as any of the learned professions. That a change in its status, a curtailing of its functions and a lessening of its usefulness as a leader of sound, scientific thought has taken place is evident to anyone. By lay medicine we mean the practice by individuals, of the doctrines of the many various cults of thought and doctrine. The chiropractor, passing his hands over the lumbar region of a person weighing 250 pounds, detects a dislocated vertebra; the Christian Scientist, by denying the existence of disease, by showing that Mind is supreme (Science and Health, 375, 21), cures paralysis by destroying the patient's belief that he has paralysis; the religious curist, affectionately laying his hands upon the sufferer's head and uttering a very short prayer, sends the patient away with the hope not only that he will feel better but that he will be better—but he will not, because degenerative changes have destroyed organs that no power whatever can restore. Misses who have read metaphysical magazines occasionally for a few months say to seasoned scientists, "Oh, but then, you couldn't understand." Clergy, who should be preparing their next Sunday's sermon, "treat" persons of whose ailments they know nothing and by repeating oft and many times an absolute falsehood in their particular case, people try to humor themselves into the belief that they really feel better when they don't.

The ardent Christian Scientist writes a letter to my patient, urging him to give up my treatment or personally calls upon him and urges that the same is sure to harm him, he ascends the rostrum and to a crowded hall announces the teachings that disease is the result of mortal mind only. The chiropractor hires the entire page of a newspaper and there toots his blatant trumpet, and the lady "psychologist" prescribes salt and water along with mental rubbish that is far more harmful than a hypertonic saline. Another practitioner advises the patient with a small mammary tumor to "pay no attention to it," and, to our shame, we have sat at meat with such.

"My boy, you haven't consumption. Go to school, come to Sunday School, go and play with the other boys," and, we may add, infect all of them that you can.

And in all these things there is the element of the marvellous, the mysterious, the unusual, the mystifying and the supernatural, all increasing the reputation of the particular person who is manipulating the "cure." When the metaphysician effects a cure it is soon all over town and his name is great among the Gentiles, whereas when a person improves under medical treatment nothing is said nor is it considered at all remarkable.

The question of personal veracity is one which enters very largely into the active propaganda of these extra medical cults. Persons claim to be improved who are not; they claim to be cured

when the same lesions with consequent symptoms persist; they claim to have had gross lesions which to the knowledge of competent scientists they never had and of which they could not have been cured.

Now it is a very easy thing to dispose of the accumulated evidence of science with a word—qualms and fears with a wave of the hand or a prayer; but it is not as easy to take a Wasserman, make an X-ray study of the gastro intestinal tract, make a basal metabolism study, take a culture of the throat, or remove an abdominal tumor.

Nor is our profession entirely blameless of the charge of purveying to the public clean, wholesome, scientific truth as the same comes to us from study, consideration and experience. Some of the utterances and writings of the present day are absolutely unfit for lay circulation and suggest obscene smut that place the late Balzac, Maupassant and Boccacio in the infant class. The subconscious mind is loaded with intellectual activities and adherent scybalae which no psychoanalytical catharsis can ever remove and the post-hypnotic state of negative hallucination sublimates an aromatic compound which makes the benzine ring look like a buzz saw. We wonder that the clear flame of the torch of learning does not go out entirely, so deprived of life-giving oxygen is this pseudo-scientific atmosphere.

But it is not necessary to multiply examples of the operation of non-scientific cults or even to name them—rather it is to our advantage to consider why they have become so widespread, untruths so generally accepted by so many, and to devise means for righting popular thought and an adequate understanding of disease as it exists, its prevention and treatment. The former is due to publicity and its partner propaganda, the latter to lack of the same. The apostles of the former announce their doctrines, their fictitious cures from the lecture platform, the pulpit, by radio, by large-lettered press, by tracts or leaflets, by word of mouth—and all in no uncertain tones.

And what is to be done about it? What form of educational propaganda may be instituted to stem this tremendous tide of untrue and absurd thought which lowers the plane of popular intelligence, and causes tremendous economic loss from preventable disease and death? Let us ask ourselves the question, Do medical men sieze every opportunity to correctly inform the public as to the truth whenever it offers and by a few well chosen words direct its thoughts along the right channels? Is there enough "person to person" work by scientists? Are there any or enough "free public lectures" on preventative medicine or any educational campaign in the public schools to train the growing mind in right thinking in medical matters and in hygiene and is there any movement on foot under the direction of the medical profession to directly oppose the active energies of these cults and to correct the untrue and absurd? We wot not.

APRIL FIFTEENTH.

This is the final date upon which prospective excursionists to the A. M. A. meeting in San Francisco will be able to arrange their trip at the reduced rate offered by the RHODE ISLAND MEDICAL JOURNAL.

Independent of scenic wonders and geographic entertainment *en route* to California, W. E. Musgrave, the Chairman of the Association's Entertainment Committee, has arranged a series of additional trips (which appear in another column) which are well worth the consideration of those who may find it convenient to prolong their stay somewhat beyond the time of the actual convention.

This travel opportunity has never before been offered to the physicians of Rhode Island, and it is altogether conjectural if it ever occurs again.

THE JOURNAL'S CALIFORNIA TRIP

(*Concluded from Page 58*)

burg, Taku Glacier and Juneau, till you arrive at Skagway, where you disembark for a railroad trip to Bennett Station and return to catch the boat for Sitka, the quaintest and most interesting city in Alaska. Leaving Sitka, travel for six days through the inside passage till you arrive at Seattle, where four days will be spent in a side trip to the beautiful Rainier National Park. Returning to Seattle, you embark by train or rail for San Francisco or points east. There are indications that this will be a very big Alaska year, so early reservations should be made for this trip.

SOCIETIES

Quarterly Meeting Rhode Island Medical Society.

The regular quarterly meeting was held in the Medical Library, March 1st, 1923, at 4 P. M., the President, Dr. Frank E. Peckham, in the chair.

The minutes of the December meeting of the Society were read by the Secretary.

The Secretary read a letter from Mrs. Imogene M. Carr, widow of Dr. George Wheaton Carr, for many years a fellow of this Society, presenting "to the Rhode Island Medical Society the life-size portrait of Dr. Carr, now in the possession of the Society, as a permanent memorial to his memory." On motion of Dr. George Crooker, seconded by Dr. Wm. R. White, it was voted that the Society accept with thanks Mrs. Carr's generous gift and that the Society communicate to the donor the Society's action.

The President announced the appointment of Dr. W. Louis Chapman, Providence, as Anniversary Chairman.

The following program was presented:

1. "Principles Underlying Weaning from the Breast," Dr. Harold G. Calder, Providence.

2. "Some Problems in Artificial Feeding," Dr. Henry E. Utter, Providence.

3. "Feeding in the Treatment of Diarrhoea," Dr. Wm. P. Buffum, Jr., Providence.

Discussion of the three papers was opened by Dr. Robert M. Lord, Providence.

A communication from the Women's Joint Legislative Committee of Rhode Island asking the Society's action in the House bill 756, known as the injunction and abatement bill to abate houses of ill repute and prostitution. Referred to Legislation Committee.

J. W. Leech, M.D., *Secretary*

Providence Medical Association.

The annual meeting of the Providence Medical Association was called to order by President N. Darrell Harvey at 9:05 P. M., January 1, 1923. The records of the last meeting were read and approved.

The reports of the Secretary, Treasurer, Standing Committee and Reading-Room Committee were read, accepted and ordered placed on file.

The President's annual address by Dr. Harvey dealt with the presentation of papers by local members of the profession, the improvement in our collations, the importance of the district society councillors, the increased success of and high plane upon which our medical journal is conducted, and urged a campaign for more members.

In accordance with Article 1, Section 6, of the By-Laws, the Standing Committee placed the following nominations for officers and committees for the year 1923:

For President, William B. Cutts, M.D. For Vice-President, George W. Van Benschoten, M.D. For Secretary, Peter Pineo Chase, M.D. For Treasurer, Charles T. Deacon, M.D.

For Member of the Standing Committee for five years, N. Darrell Harvey, M.D. For Trustee of Rhode Island Medical Library for one year, P. Williams, M.D. For Reading-Room Committee, George S. Mathews, M.D., Elihu Wing, M.D., Herman C. Pitts, M.D.

For Delegates to the House of Delegates of the Rhode Island Medical Society: C. A. McDonald, M.D., J. P. Cooney, M.D., G. A. Matteson, M.D., J. E. Donley, M.D., J. B. Ferguson, M.D., Herbert E. Harris, M.D., Bertram H. Buxton, M.D., Peter P. Chase, M.D., Ira H. Noyes, M.D., Prescott T. Hill, M.D., William P. Buffum, Jr., M.D., George R. Bardon, M.D., H. G. Partridge, M.D., Arthur H. Ruggles, M.D., Alex. M. Burgess, M.D., F. V. Hussey, M.D.

Councillor for two years, Arthur Hollingworth, M.D.

It was moved and seconded that the by-laws be suspended and the Secretary empowered to cast one ballot for their election. It was so voted.

Dr. Cutts took the chair. He spoke a few words of appreciation and asked for the co-operation of the members. He then appointed the following committees: Collation, Frank H. Mathews, M.D., Edward S. Cameron, M.D. Publicity, Fred V. Hussey, M.D., Raymond G. Bugbee, M.D., Lucius C. Kingman, M.D.

A letter from Mrs. L. F. C. Garvin was read, acknowledging the resolutions on Dr. Garvin's death. The Standing Committee having approved the following application for membership, Dr. Harold Inman Gosline, the Secretary was instructed to cast one ballot for his election.

It having been moved and seconded that the dues for the coming year be $5.00, the matter was

discussed by Drs. Brown, Kelley, Jones, Mowry, Mathews and Chase, and it was so voted.

On motion of Dr. George S. Mathews, $175 was voted for the support of the reading room for the ensuing year.

Dr. Mathews moved that $100 be appropriated for binding medical journals; Dr. Leonard moved an amendment, making this $300, and the latter sum was appropriated. On motion of Dr. Kelley, it was voted to appropriate $50 a meeting for the use of the medical building during the coming year. Dr. Sanborn reported two cases of cerebrospinal lues and presented one of these with unusual sensory disturbances. Dr. Kelley suggested that the X-ray illuminator be put in shape and it was voted that he be made a committee of one, with power to arrange this. The meeting adjourned at 10:25 P. M. Attendance, 41 members. Collation was served.

Peter Pineo Chase, *Secretary*

Providence Medical Association.
(Providence District Society)

The regular monthly meeting of the Providence Medical Association was held at the Medical Library, 106 Francis Street, Monday evening, March 5, 1923, at 8:45 o'clock.

Program: Pasteur: The world's greatest benefactor, Dr. Ernest Laplace, Philadelphia, Pa.

The Standing Committee has approved the following applications: Dr. Francis Herbert Coone, Dr. Myer Arthur Persky, Dr. Clarence L. Scamman.

Collation followed.

Dr. Peter Pineo Chase, *Secretary*

Rhode Island Medico-Legal Society.

The Rhode Island Medico-Legal Society held its regular quarterly meeting at the Medical Library on Thursday, January 25, 1923, at 5:00 P. M. Twenty-two members and eight guests were present. Reports on the deaths of Dr. George Eston Simpson and Dr. Edward P. Stimpson were read and ordered spread upon the records. The President, following a few introductory remarks as to his promptings for the subject under discussion for the last two meetings, introduced Dr. Edmund B. Delabarre, professor of psychology at Brown University, who gave a very profound and intensely illuminating talk on "Persisting Psychological Effects of the War." There was a very active discussion entered into by many members of the Society. Following the adjournment of the meeting a light supper was served.

Jacob S. Kelley, M.D., *Secretary*

Pawtucket Medical Association.

Report of the January meeting of the Pawtucket Medical Association, January 18th, 1923:

There being no business of importance, the members present listened to an instructive talk on employers' liability insurance from the viewpoint of the insurance company.

This talk was given by Mr. Dodge of the Liberty Mutual Insurance Company. He explained the employer's liability and why, in some instances, due to what is called third party interference or causation, the insurance company for the employer is not liable. The employee, however, must seek damage from the third party by a civil suit, or may sue the employer for allowing fooling or negligence on the part of others, even though the injured employee be at his work at the time of accident.

Mr. Dodge explained that the employers' liability insurance varied in each State and that what might have occurred in one State is no precedent for another State, and, further, that while the insurance company's verdict might seem severe, yet these judgments are really hidebound by law, and of the law the physician is often only half informed.

Numerous questions on liability cases, contract work, insurance hospitals and other matters pertaining to the medical profession versus the insurance companies were put to Mr. Dodge and were frankly answered.

George E. Ronne, M.D., *Secretary*

December Meeting of the Pawtucket Medical Association.

"Resolved, That the Pulmotor be discarded and that the prone-pressure (Schaefer) method of artificial respiration be substituted; that the Schaefer or manual method of resuscitation of apparently drowned, gassed or electrically shocked persons be taught generally to the public of all ages and walks of life; that the Schaefer method is, in the opinion of the Pawtucket Medical Association, the only known method of resuscitation which is re-

liable, efficient and always at hand; that the method can be applied immediately, giving the person treated the best hope for life, without injury to the air cells of the lungs or other injury due to poorly or improperly adjusted apparatus, even when said apparatus is available."

The above resolution, moved by Dr. Chas. H. Holt, Secretary Pawtucket Board of Health, and seconded by Dr. Byron U. Richards, Secretary R. I. State Board of Health, was passed by the Pawtucket Medical Association at its December meeting without a dissenting vote. It merits the attention of the general public, most of whom at present have popularly considered the pulmotor the one sure way to save life from gas, water or electricity. It is a fact established by many present day investigators, notably the scientists connected with the U. S. Gas Association and the National Electric Light Association, that the pulmotor has never saved a life. Aside from the fact that it is seldom available at the place of accident, it requires certain mechanical knowledge to adjust and operate which is frequently not at hand. As an extract from the U. S. Army Medical Department Review for February, 1919, states: "—even more important is the fact, demonstrated now by universal experience, that when the apparatus is known to be available and sent for, *the manual method is neglected.* Thus, today, the apparatus in public use is, on the whole, contributory very materially to decrease the saving of life."

The Association was addressed by Dr. E. Preston Jones of Boston, Associate Director of First Aid of the New England Division of the American Red Cross. He carefully outlined the work on first aid, placed emphasis on what might properly be done before the doctor arrived, showed how the layman is instructed in keeping already-infected wounds as clean as possible, in minimizing the discomfort of broken bones, as in fractures, demonstrated dressings and bandages advocated for use by the police, firemen, school children and the general public of this city, to whom he has been lecturing during the past six weeks. He stressed the importance of continuous publicity of the Schaefer method of artificial respiration, giving many instances in his personal experience of its efficiency and value, deplored the fact that the average individual knows so little about this method, when it might be used to such good purpose while other agencies were being sought. He stated that valuable time seems almost always to be lost, which might be used with advantage on the unfortunate victim, while helpless bystanders wait for some mechanical means of resuscitation, which, being mechanical, might be out of order, not available, or, on its arrival, to find that life had passed away while others waited for this assistance.

It is not out of place, at this point, to briefly outline the Schaefer method of resuscitation to the extent that the victim is placed prone, on his stomach, clothing about the neck loosened or cut away, one arm extended upward, the forearm used as a pillow for the head, which should be turned toward the open window, if indoors, or toward the breeze, if out of doors; by reason of being prone, the patient gets every advantage of plenty of fresh air. The other arm is placed at the side. With the person in this position, the rescuer should straddle the victim, place one hand on each side of the back of the chest about over the kidney, thumb beside the other fingers so that it will not get tired too soon, the weight of the rescuer is gradually placed on the hands and wrists, increasing to a sudden little push just before the pressure is released. This should be done about 12 to 15 times to the minute. The air is allowed to come back into the lung by itself, as the muscles of the chest wall and the lungs tend to return to their own normal quiet position.

Mr. Rollin Buckminster, Superintendent of the Pawtucket Gas Company, presented before the Association both the pulmotor and a new apparatus known as the "Inhalator." In the demonstration of the mechanical action of these two he was ably assisted by Mr. E. I. Pratt, Foreman of the Central Falls plant. It is now the intention of the Pawtucket Gas Co. to discard the pulmotor in favor of the manual method of artificial respiration, in which all employees are being systematically instructed. The inhalator is of assistance in gas poisoning cases only, in that after the patient has started to breathe it allows oxygen under pressure to be given to hasten full recovery.

Drs. H. G. Partridge and Edw. S. Cameron of Providence were guests of the Association and spoke of the "valuelessness" of apparati similar to the pulmotor in reviving or assisting to breathe infants who were apparently stillborn, believing that the manual methods of resuscitation to be the only one practicable, safe and efficient.

HOSPITALS

Providence City Hospital.
News Notes.

The regular meeting of the Staff Association was held at the City Hospital on February 21, 1923. The statistical report of the number of patients and diseases treated by the Eye and Nose and Throat Departments was read and discussed.

At the present writing the hospital is crowded. The most common diseases are measles, diphtheria, scarlet fever and whooping cough, with an unusual number of measles patients. The most of the deaths are among children under five years suffering from pneumonia following measles.

Physicians are invited to attend talks held in the office of the Superintendent at 12 M. every Wednesday.

St. Joseph's Hospital.
Dr. Chapman.

Dr. Angelo Archette and Dr. John R. Bernardo have finished their terms of service as house officers at St. Joseph's Hospital and will begin practice in this city.

A meeting of the Staff Association of St. Joseph's Hospital was held on Friday, March 9, Dr. D. Frank Gray presiding.

Cases were discussed as follows: By Dr. McEvoy, a case of brain tumor; by Dr. Coughlin, duodenal ulcer, volvulas of the ileum; Dr. A. McLaughlin, Cæsarian section for complete central placenta prævia; Dr. Monahan, diabetic coma; Dr. Reynolds, cholecystitis; Dr. Harris, traumatic cerebral hemorrhage, septic myocarditis, hydronephrisis, empyema.

Rhode Island Hospital.
Dr. Pickles.

The regular monthly meeting of the Internes' Association was held on February 19, 1923, and was attended by about 40 members of the staff and internes. Dr. Alex S. Burgess gave a very interesting talk on "The Treatment of Diabetics," stressing particularly the care of various types of patients affected by this disease. In the course of his discussion he brought out much information, as yet unpublished, concerning the use of "Insulin," the recently discovered extract of the islands of Langerhans. Following the talk, an infant with congenital absence of the greater portion of the occiput and consequent hernia cerebri was shown. The child was 21 days old, and in spite of the fact that over half of the brain was outside of the cranium, seemed well and healthy and was gaining weight steadily.

Dr. Francis King, who has just completed his service at this hospital, is serving an interneship at the Providence Lying-In Hospital, and Dr. Henry S. Joyce, after spending a month at the Boston Consumptives' Hospital, is also at the Lying-In Hospital. On April 1, 1923, Drs. Royal C. Hudson and Wilfred Pickles began a month's leave of absence, and on the same date Drs. Harold Caswell, Joseph P. Nourie and Harold Spaulding started on their regular interne's service under the new schedule.

Dr. John M. Peters, superintendent of the hospital, with a party including Dr. Frederick T. Rogers, has started on a visit to South America in the course of which he expects to go as far south as Buenos Aires. He will return to his work at the hospital on April 1, 1923.

A Sanborn metabolism apparatus has recently been installed and is expected to be of great value in the study of pathological conditions of the thyroid and other glands of internal secretion.

The regular monthly meeting of the Internes' Association was held in the Chapel on Monday evening, January 15, 1923. Preceding the meeting proper, interesting patients from the wards were presented briefly by the various services. These included a case of arsenic dermatitis following the administration of neoarsphenamine; a fusiform aneurysm; a patient with carcinoma of the breast metastasizing to the bones of the pelvis; and one showing three penetrating bullet wounds of the skull with resulting left-sided hemiplegia beginning to clear up, the bullets being still lodged within the cranium. Dr. Murray S. Danforth gave a very interesting talk on fractures of the lower extremity, illustrating the application of various forms of traction apparatus by means of numerous models. About forty staff men and internes attended the meeting.

On March 1, 1923, Dr. Cyril M. Lydon returned from an obstetrical appointment in New York, and Dr. L. Arthur Hanson returned from a special appointment at the Providence Lying-In Hospital.

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ORIGINAL ARTICLES

THE BIOLOGICAL ASPECTS OF HAY FEVER.*

By Harry S. Bernton, A.B., M.D.
Washington, D. C.

Associate Professor of Hygiene, The Medical Department, Georgetown University; Special Expert, United States Public Health Service.

(From the Clinics of Applied Immunology of the Woman's Welfare Association and of the New Emergency Hospital.)

The many benefactions which mankind has derived from the plant kingdom need scarcely be mentioned to an assembly of biologists. During the greater part of the seventeenth century, the followers of Galenism obtained from the vegetable kingdom their remedial agents to adjust the derangements of the body—their "microcosm." Years later, in 1860, the genial autocrat gave expression to the dependence of man upon the plant in his reference to opium "which the Creator himself seems to prescribe, for we often see the scarlet poppy growing in the cornfields, as if it were foreseen that wherever there is hunger to be fed, there must also be pain to be soothed."

Therefore it seems paradoxical to associate the periodic discomforts of hay fever with the recurring phenomena, observed in plants. The history of hay fever forms an interesting but incomplete chapter in the history of medical science. In 1673, Benningerus recorded the first convincing case, that of a lady who suffered from coryza every year when roses flowered. In 1819, Bostock recognized the disease as a definite clinical entity. He then gave an account of "A Case of a Periodical Affection of the Eyes and Chest."[1] In 1833, Elliotson suggested but was unable to prove the cause of the disorder. "The disease," he stated, "depends upon the flower of the grass, and probably upon the pollen." Many causes of hay fever were advocated by the old English school. Solar heat and light, ozone, effluvia from hay, emanations from flowering plants and from decaying vegetable substances were numbered among the potential causes. In 1865, Blackley[2] first advanced positive proof that the pollen of the grasses was responsible for the English type of hay fever. Blackley, himself, was a victim of the disease for twenty-five years and referred to it as the "annual torment." To him belongs the credit for introducing the cutaneous test, which has since his time found a useful field of application in the control of hay fever.

In this country, Morrill Wyman,[3] in 1872, made the first noteworthy contribution to the study of the autumnal form of the disease. He favored the pollen theory. He performed the following experiment to support his views. In September, 1870, Wyman sent a parcel containing a specimen of Roman wormwood (Ambrosia) in full bloom to a resort in the White Mountains. There the parcel was opened and eight hay fever subjects sniffed it. One was seized with asthma, six had varying symptoms of catarrh, and one was unaffected. Eight other patients at the resort who did not sniff the plant remained free from symptoms. In 1875, Marsh shared the same view as did Wyman and believed that autumnal catarrh was caused by the "presence of pollen of flowering plants in the atmosphere."

Even within our own time diverse opinions concerning the cause of hay fever have found expression. Bacteria and the essential oils, which yield the odorous emanations of plants, have been cited by some writers. Others have even regarded the disease as due to a disturbance of the sympathetic nervous system, or due to a specific sensitiveness of the cranial nerves. In 1902, Rudolph has classified hay fever as a degenerative psychosis. In 1919, Selfridge[4] has attributed the vaso-motor disturbances, seen in hay fever, to a disharmony of the endocrine glands. Sajous has given first place to the pituitary body as the great regulator of the endocrine system. He credits the pituitary with being "the fountain head of vaso-motor disturbances of the air passages, as are found in hay fever and asthma."

The German school, represented by Dunbar[5] and his pupils, Weichhardt, Prausnitz, and Kam-

*Read before the Biological Society of the District of Columbia, February, 1923.

mann, accepted the pollen theory which had been advocated by the English and American schools as the cause of hay fever. Their work placed our present day knowledge of the disease on a firm scientific basis. In 1902, Dunbar demonstrated that the proteid constituent of the pollen grain was the active agent. He prepared an aqueous extract of grass pollen proteid. By instilling one drop of proteid solution of a dilution of 1:20,000 in the conjunctival sac of susceptible individuals, Dunbar produced irritation of the eye, which was soon followed by hay fever symptoms. Normal persons were unaffected by a similar procedure; and even the subcutaneous injection of protein solution in them produced no results.

The suggestion of Dunbar that the pollen protein is a toxin has not, however, met with acceptance. If this were the case, antibodies to the pollen toxin would be present in those naturally immune. On the contrary, Clowes,[6] by the use of the precipitin and complement fixation tests, has shown the presence of specific antibodies in the blood of hay fever subjects, who react to the pollen protein. The converse obtains in diphtheria. A natural antitoxin is demonstrable in those who do not react to diphtheria toxin. Furthermore, Koessler[7] has succeeded in sensitizing guinea pigs to the protein solution of ragweed pollen by injecting them with the blood of a patient suffering from autumnal hay fever.

The earlier writers, notably Blackley and Wyman, called attention to the occurrence of hay fever among the educated classes. They also noted that the farming class was least subject to the malady. They believed that continued exposure of the rural inhabitants to the action of the pollen resulted in an insusceptibility to the baneful effects. Blackley designated hay fever as an aristocratic disease. The present day prevalence of the disease among artisans testifies to the changing character of aristocracy with the changing times.

Wyman observed a family predisposition to the disease among his patients, for in fifteen cases, of his series of seventy-seven, more than one member in the family was affected. The elaborate studies of Cooke and VanderVeer[8] confirmed the earlier observations regarding the hereditary tendency of hay fever. Two hundred and forty-four patients in their series of five hundred and four, or almost 50 per cent, gave a positive family history. In thirty-nine cases, there was a positive inheritance history on both paternal and maternal sides; whereas in two hundred and five cases the inheritance history was unilateral. The transmission of sensitization as a dominant characteristic from parent to offspring in accordance with the Mendelian law was suggested by a further analysis. Their deduction is most noteworthy, and reads as follows: "For the cases of double inheritance, the period of maximum liability is in the first five years when 36.3 per cent develop symptoms. For single inheritance cases, it is the age from ten to fifteen, while the height of the curve in those cases with negative history is not reached until a still later age, twenty to twenty-five."

In our series of sixty-seven hay fever cases for the year 1922, forty-five, or 67 per cent, had a positive inheritance history. This high incidence was striking. Accordingly, it seemed advisable to examine the children of our hay fever patients for evidence of transmitted sensitization. Cutaneous tests were performed in eight children with the pollens of white oak, timothy, and short ragweed with the following results: Of three children of one mother, suffering from the spring type of hay fever, two, ages fifteen and fourteen, reacted positively. The third, aged ten years, gave a slight reaction to timothy pollen. The older children were subjects of the summer and fall types of the disease, whereas the youngest was free of symptoms. The oldest of three children, ages nine, six and five, respectively, whose mother was a victim of the autumnal form, gave a slight reaction to timothy. These three children exhibited no symptoms. Likewise, two other children, ages twenty-three and thirteen, respectively, of a mother sensitive to ragweed, gave negative reactions and were free from the disease. In summary, of the eight children belonging to three families in which the mother was an hay fever subject, two reacted positively and were clinical cases. Of the six children clinically free of symptoms, two gave suspicious reactions to timothy pollen and four gave negative reactions.

This series is too small to permit of any deductions, but the indications for the control of hay fever and its serious sequelæ are clear. Experience has taught only too well that a definite proportion of children in hay fever families sooner or later increase the total of clinical cases. Testing

for sensitization is a simple performance. Desensitizing treatment of the young, instituted promptly upon the early recognition of cutaneous sensitiveness, even before the advent of symptoms, may suppress clinical manifestations. This procedure is in accord with the spirit of preventive medicine.

The symptoms of hay fever are referrable to the skin, eyes, ears, nose and throat. Not only does the severity of symptoms vary in different individuals, but also the degree to which each of the organs is affected. Itching of the scalp or itching of the skin over other parts of the body may usher in the disorder. This is accompanied by a tickling and itching of the lining membrane of the nose which extends to the eyes and even into them. Sneezing, in paroxysms, inevitably follows the nasal irritation. The rising hours usually mark the period of attacks of sneezing, due in part to change of position and in part due to a cooling of the body surface. Attacks of sneezing may be provoked by dust, by draughts, or by change from shade to sunshine. The watery discharge from the nose requiring the daily use of two or three dozen handkerchiefs by some patients is equally distressing. The sensation of fullness in the nostrils gives rise to a sense of suffocation which necessitates mouth breathing.

The eyes are subject to a similar course of discomfort. Itching of the eyeball and eyelids, aggravated by rubbing, brings on a copious flow of tears. The eyelids may become so swollen as to obscure vision; and the irritation so intense as to make the eyes extremely sensitive to light. The itching of the nose and eyes extends to the roof of the mouth, to the posterior nares, and through the Eustachian tube into the ears. The itching of the ears is intolerable. Cough is an inconstant symptom of hay fever. When it occurs, it is the cough of irritation due to a tickling sensation within the trachea.

Asthma, the most dreaded complication, comes early in the course of some patients, and late in others. It made its appearance in 72 per cent of our cases. The depressing effect on the individual of the above symptoms, more or less continuous for weeks, is obvious. It has been estimated that about one per cent of the population of the United States is subject to hay fever. Therefore, the impaired efficiency of eleven millions makes the disease one of gross economic importance.

It is noteworthy that the skin, eyes, ears and upper respiratory tract, the organs most exposed and most accessible to environmental agents, are the organs affected. Blackley, as the result of ingenious studies of pollen, endeavored to explain the mechanism of hay fever. He believed that the disturbance was initiated by the action of a volatile oil derived from the coating of wax or oleoresin of the inhaled pollen grains. Under the favorable conditions of warmth and moisture which obtain in the nasal and oral cavities, the development of the pollen-tube came next in sequence. The extension of pollen tubes along the surface of mucous membranes and possibly their penetration into mucous follicles produced signs and symptoms of irritation. Moreover, the expulsion of the granular contents of the pollen grains into the submucous cellular tissues resulted in an effusion of fluid and the consequent feeling of engorgement of parts affected. Blackley found by experiment that the granular matter of pollen passed by dialysis through animal membranes. "It is highly probable," he thought, "that the finer particles of this matter....pass through the mucous membrane of the respiratory passages, and by getting into the circulation in this way give rise to constitutional symptoms."

Both a mechanical and physiological basis for the symptoms of hay fever have thus been offered by a pioneer. Curiously enough, no attempt has been made, to my knowledge at least, to corroborate the above view of the mechanical action of pollen grains upon mucous surfaces. There is ample clinical evidence, however, in support of the intoxicating effects of dissolved pollen granules or pollen protein, as it were, upon the susceptible individual. In the course of intracutaneous testing or of desensitizing treatment with solutions of pollen protein, symptoms of hay fever or of asthma may suddenly arise, even though the subject has in no way been exposed to the inhalation of pollen dust.

The variety of pollen to which the patient is sensitized determines the type and duration of the disease. The spring type, which begins in March and ends in June, is coincident with the pollination of the trees; the summer type, caused by the pollen

of the grasses, runs its course from May to the middle of July; and the autumnal type, due to ragweed in the eastern United States, begins in the latter part of August and usually terminates with the first frost. There are also patients who are sensitized to both the pollens of the grasses and of the ragweed. Their season is, therefore, prolonged. A few unfortunates, who are in addition sensitive to the pollen of trees, may suffer from symptoms from early April to November.

In determining the plant responsible for the disease, we need consider only the anemophilous, which, in virtue of their adaptation to wind pollination, have small and inconspicuous flowers, without bright color or scent. The amount of pollen they produce is surprisingly large. Scheppegrell[9] has estimated that a single ragweed plant may generate 4,000,000,000 pollen grains or 2.5 cc. during the course of a day. Insect pollinated plants have conspicuous or brightly colored blooms, which are provided with honey glands. Their pollen grains are large and surrounded with a sticky envelope. There is scarcely enough of them floating in the air to excite symptoms. The fundamental principle that hay fever plants are wind pollinated excludes from consideration the roses, goldenrod, sunflower, daisy, dandelion and all of the common fruit trees. The popular fallacy that roses and goldenrod are causes of hay fever still has a strong hold on the imagination, and the continued exploitation of their pollen extracts in the prevention of hay fever is unwarranted.

The cutaneous reaction, first observed by Blackley in 1865, has proved a valuable diagnostic aid in determining the plant responsible for symptoms. A series of superficial scratches is usually made on the forearm with a needle, and to each abrasion a slight amount of pollen is applied by means of the flattened end of a toothpick. The pollen is moistened with a drop of decinormal sodium hydrate to assist in the solution of the pollen protein. Within half an hour, a characteristic wheal, such as is seen in urticaria, appears at the site of the abrasion to which the offending pollen has been applied. A zone of redness surrounds the wheal. There may also be more or less itching of the skin of the forearm. A positive skin reaction indicates that the patient is sensitized to that particular pollen which produces the wheal. The pollens to which the patient is not sensitized will cause no skin reactions. Furthermore, the degree of sensitiveness is determined by repeating the skin tests with varying dilutions of the protein extract of the pollen. In practice, one drop of each of the dilutions of 1:100, 1:500, 1:1000, 1:5000, 1:10000, and 1:20000 of the extract is placed in succession on the skin of the forearm and a superficial scratch is made through each drop. Obviously the limit of sensitiveness is measured by that dilution which produces a positive skin test, and beyond which the higher dilutions fail to react.

The formation of an urticarial wheal represents an effusion of serum within the superficial layer of cells. It is the tissue response provoked by the presence of an irritant. It is assumed that the skin, in common with the blood and tissues, contains a specific proteolytic ferment which liberates from the protein molecule of the pollen a poisonous end product. It is the latter which causes the inflammatory reaction in susceptible individuals.

This process is identical with the one which takes place on the mucous membranes of the conjunctivae, of the nose, and of the mouth. The presence of proteolytic enzymes leads to a parenteral digestion of pollen protein. The cleavage products of such digestion give rise to local symptoms and, on absorption, to constitutional symptoms.

The specific character of the cutaneous tests was duly appreciated. The later studies, however, of Koessler, Goodale, Scheppegrell, Cooke and VanderVeer, and Walker developed the conception of "group reaction." It was observed that patients subject to June colds reacted to the pollens of the Gramineae, whereas sufferers from the autumnal type of hay fever reacted to the pollens of the large family of the Compositae. Cooke and VanderVeer tested twenty cases of early hay fever with the pollen protein of six of the most common grasses. With few exceptions, they found that all pollens yielded positive skin tests. Similarly it was shown that patients reacting to the pollen of the ragweed gave in many instances positive skin tests with the pollens of goldenrod, daisy, goldenglow, and sunflower. The multiplicity of skin reactions led Scheppegrell[10] to remark, "The question is not whether a patient reacts to various pollens, but whether he is sensitive to the pollen to

which he is exposed." Accordingly, he divided all hay fever pollens into four groups, believing that a pollen extract made from any member of a group would be applicable to other members of the same group.

Our interest in the interpretation of multiple skin reactions, observed in hay fever patients, led us to a further study of the question.[11] Some of our patients, sensitized to the pollen of the short ragweed, were tested with the pollens of four other representatives of the Compositae group, with the following results: Seven gave positive skin tests to the pollen of the giant ragweed and to the pollen of Cosmos. Sixteen positive and two negative reactions were obtained with the pollen of Tithonia. Forty-eight positive and ten negative reactions were obtained with the pollen of the Wormwood. Thus of a total of ninety tests, seventy-eight, or 86 per cent, proved positive. These findings are confirmatory of previous studies. The positive cutaneous tests obtained with the pollen of Tithonia—an insect pollinated plant of South America to which our ragweed patients may never be exposed—furnish a striking example of "group reaction."

In addition, our cases of the fall type, fifty-seven in number, were tested with various windborne pollens which had been collected during an hay fever survey of the District. Four hundred and forty-two tests were performed with pollens other than those of the Compositae family. Of this total, 127, or 28.7 per cent, of the tests were positive. The pollens which gave the positive reactions represented twenty-one genera of plants belonging to ten families. Five pollens which caused no reactions in the series of cases were members of four family groups—the Pinaceae, the Moraceae, the Cornaceae, and Plantaginaceae. It must be emphasized that the above series of patients had symptoms of hay fever coincident with the flowering of the ragweed, and that positive skin tests were obtained not only with the pollen of the ragweed and other Compositae, but also with the pollens of ten family groups. These included the grasses and trees, and weeds. The multiplicity of these skin reactions by no means invalidates their specificity.

The character of the changes taking place in the body which lead to sensitization, in other words to poisoning by the cleavage products of parenteric or enteric digestion, is still undetermined. Clinically, the evidence points to multiple sensitization as the rule and not the exception. It seems as if a primary sensitization begets a secondary sensitization. Patients reacting to ragweed pollen may also react cutaneously and clinically to horse dander, chicken feathers, or to various food proteins. It is not unreasonable to suppose that secondary sensitizations may include other pollens. Our studies have shown that this is actually the case. The question suggests itself, "Are the pollens which give positive skin reactions indicative of a secondary sensitization capable of producing clinical symptoms of hay fever?" Our belief is that the patient is not as sensitive to the secondary or accessory factors as to the primary factor, and also that the former in massive doses will create transitory symptoms. This may account for the "slight colds" of short duration to which hay fever patients are subject out of their customary season. One case history may well illustrate this point. A botanist, who suffered from severe autumnal hay fever for eight years, gave positive skin reactions with the pollens of the ragweed, artemesia and sheep sorrel. The reaction to artemesia falls under the heading of group reaction, whereas the reaction to sheep sorrel may be regarded as a type of secondary or accessory reaction. Curiously enough, the patient asserted that exposure to sheep sorrel invariably ushered in symptoms of hay fever. They were, however, brief and slight.

From the foregoing discussion, it is apparent that a knowledge of flowering dates and the date of onset of hay fever symptoms must be correlated with the results of cutaneous tests. Positive skin reactions obtained with pollen must needs be repeated with the pollen extract in varying dilution. A correct appraisement of the above studies determines appropriate treatment.

The first reports on the treatment of hay fever by active immunization were published in 1911 by Noon[12] and Freeman from Wright's laboratory in London. In this country, Koessler in 1910 and Clowes in 1913 first attempted the treatment of the autumnal form. The object of treatment is to bring the patient to the point of tolerating the toxic material in his environment and thereby enjoying freedom from symptoms. Such a degree of tolerance may be attained by a series of subcutaneous injections at intervals of four to seven

days with gradually increasing amounts of pollen protein. The protein extract is derived from the pollen which has been determined by the methods previously described, to be the cause of the seasonal discomfort. It is desirable, moreover, that the course of injections be completed before the pollination of the offending plant.

The results of treatment are encouraging. Twenty-five per cent are entirely relieved, fifty per cent greatly relieved, fifteen per cent slightly benefited and ten per cent not benefited.[13]

Our attention has been directed to the study of the causes of failure by this mode of treatment. Our preliminary observations indicate that the methods of collecting and extracting the pollen, and the method of preserving its antigenic properties may account for some of the disappointments. To illustrate, the ragweed pollen is obtained, according to the recommendations of Wodehouse, by grinding the dried catkins and separating the pollen grains with carbon tetrachloride. The pollen dust, when filtered and dried, is of an olive drab color. The color of the ragweed pollen as seen on the anthers is golden yellow. This golden yellow color is somewhat bleached by carbon tetrachloride.

It will be recalled that the blooms of the ragweed mature in succession. Consequently, when the catkins are dried and ground, the pollen obtained consists of a mixture of mature and immature grains. This fact may explain the difference in color from that of the mature yellow grains. In the plant kingdom color changes accompany the process of maturation. Obviously, an extract made from the mature pollen grains is likely to have more specific antigenic properties than one made from a mixture of mature and immature grains.

This opinion is confirmed by the following study: Ragweed plants, collected before the appearance of catkins, were dried and pulverized. Cutaneous tests with the plant powder gave negative skin reactions in eighteen, and weakly positive reactions in five cases. In no instance did the powdered plant provoke a skin reaction comparable with that produced by the ragweed pollen. The conclusion seems warranted that the peculiar property of the pollen grains, which calls forth the specific proteolytic ferment in the causation of an urticarial wheal, is not shared by the rest of the plant structure. The extreme degree of specificity is thus made evident. Therefore, in order to make desensitization complete, it is essential that the extracts be derived from the exciting agent—the mature pollen.

Authors are agreed that the duration of immunity, if attained, rarely extends beyond two seasons. Hay fever victims are accordingly confronted with the necessity of courses of injections at least every other year. Rarely does spontaneous cure take place.

The possibility of desensitization through the intestinal mucosa was suggested by the work of Schloss.[14] Children who were sensitized to egg and milk protein were desensitized by the ingestion of capsules which contained two to five milligrams of egg or milk protein. The number of capsules taken each day was gradually increased until tolerance for large amounts was acquired.

We have repeated similar feeding experiments in our patients, using capsules of the powdered ragweed plant, including the blooms. The results are significant. One case reported that in February she was a "typical hay fever victim" for a few hours of the day after taking a capsule. Several patients reported characteristic itching of nose and eyes following ingestion of capsules, whereas one other patient spoke of the paroxysms of sneezing during the rising hours whenever she had taken a capsule the night before. One patient, suffering from an asthmatic bronchitis, was subject to severe attacks during the night following the ingestion of capsules before retiring. A boy, aged nine, gave a history of perennial asthma, which became worse during August and September. He showed on first examination a positive skin reaction to the extract of ragweed pollen in the dilution of 1:5000. A course of feeding of capsules of ragweed was prescribed. At the end of five months, the application of pollen to a skin scratch on the forearm produced no reaction. The boy's sensitiveness, as judged by a skin test performed monthly, was gradually reduced to a minimum. There was, however, only a slight improvement of symptoms during the critical season. Our clinical findings do not confirm Koessler's statement that pollen protein does not penetrate from the gastrointestinal canal into the circulation. Encouragement lies in the fact that specific symptoms of protein intoxication result in susceptible individuals

from the ingestion of powdered ragweed plant, collected in blossom. The hope is entertained that in the prophylactic treatment against hay fever ingestion may displace injection.

Many questions have inevitably presented themselves in the study of the problems associated with hay fever. I feel it a pleasure and privilege to acknowledge my indebtedness to several members of this Society for their sympathy, counsel and assistance which have been accorded to me in generous measure. I desire especially to thank Dr. W. W. Stockberger, Mr. Homer C. Skeels, Mr. H. A. Allard and Dr. C. E. Chambliss of the United States Department of Agriculture.

[1]Bostock: Case of a Periodical Affection of the Eyes and Chest. Medico-Chirurgical Transactions, London, 1819, vol. x, part 1, pp. 161-165.

[2]Blackley: Hay Fever. Its Causes, Treatment and Effective Prevention. 2nd Edition. London, 1880.

[3]Wyman: Autumnal Catarrh (Hay Fever) New York, 1872.

[4]Selfridge: Endooring Glands and their Relation to Vasomotor Disturbances of the Air Passages, Hay Fever, and Asthma, with the Past Year's Report. Cal. State J. Med. 17:106, April, 1919, and 17:139, May, 1919.

[5]Dunbar: Zur Ursache and specifischen Heilung des Heufiebers, Munchen, 1903.

[6]Clowes: A Preliminary Communication on Certain Specific Reactions Exhibited by Hay Fever Cases. Proc. Soc. Exp. Biol. and Med., 1913, x, 69.

[7]Koessler: The Specific Treatment of Hay Fever (Pollen Disease). Forcheimer's Therapeusis, 1914, v, 671.

[8]Cooke and VenderVeer: Human Sensitization. Jour. Immunology, 1916, 1, pp. 201.

[9]Scheppegrell: Hay Fever and Its Relation to One Hundred of the Most Common Plants, Trees, and Grasses. Med. Record, Aug. 11, 1917. 92:230.

[10]Scheppegrell: The Classification of Hay Fever Pollens from a Biological Standpoint. Boston Med. & Surg. Jour., July 12, 1917, vol. 177, No. 2, pp. 42.

[11]Bernton: The Significance of Multiple Cutaneous Reactions Observed in Hay Fever Subjects. To be published.

[12]Noon: Prophylactic Vaccination against Hay Fever. Lancet, 1911, vol. 1, pp. 1572.

[13]VanderVeer: Modern Therapy in Asthma and Hay Fever. Health News, New York State Dept. of Health, October, 1921, vol. XVI, No. 10, pp. 204.

[41]Schloss: Allergy in Infants and Children. Am. Jour. Dis. Chil. 1920, 19:433.

DISTRICT SOCIETY PRESIDENT'S ADDRESS.*

N. Darrell Harvey.
Providence, R. I.

Inasmuch as the by-laws of the Association prescribe that the retiring President shall at the annual meeting address the fellows, I am going to ask your indulgence tonight if I forego any attempts at delivering a prepared oration but rather in an informal way allude to certain matters which I think may be for the welfare of the Society.

The meetings throughout the year have, as you have heard from the report of the Secretary, been well attended and the programme of subjects offered for consideration have as a general thing been most interesting and instructive. The readers and discussors were for the most part from our own membership with few exceptions from allied sources within our State.

The necessity for engaging out of town speakers has not, in my opinion, been proven in the past year, as, with the scores of well qualified members rich in experience in all branches of medicine, we can be self entertaining and only occasionally feel the necessity and then mainly for the sake of a change of calling upon some celebrity from out of town. The value of and interest shown in the symposiums that we have had have been a source of satisfaction and I hope they will be continued by my successors. But still a large proportion of our membership is rarely represented at our meetings, so our future endeavors must be to reach them and implant more zeal and enthusiasm, if possible, so that their co-operation in the work of this Association can be counted on. Much reliance in attempting to draw out a large attendance at our meetings has been placed upon the Collation Committee, and a much larger appropriation from our treasury has been afforded them to make their part of the entertainment more attractive. A new caterer has been secured and general satisfaction with his efforts has been expressed. This part of the programme, appealing, as it appears, to all, but much more to some than others, should in my opinion never be allowed to suffer from lack of funds.

But the organization of the body politic and its maintenance of efficiency should receive our utmost consideration.

The American Medical Association, through its Committee on Organization, has made the Council in the State Societies and the Councillor in the District Societies the chief instrument for:—

1. Effecting and maintaining organization.
2. Stimulating the interest and zeal of members in organizational and professional affairs.

*Read before the Providence District Medical Society at its regular meeting January 1, 1923.

3. Deciding questions at issue between individual members.

4. Safeguarding the interest of the profession by securing observance of the principles of ethics.

5. Protecting the rights and privileges of the individual member and of the individual society.

6. Maintaining the ideals of the organized medical profession.

It therefore appears that the first duty of the Councillor of this Association is the upbuilding of medical organization and its maintenance on the highest possible basis.

"Organizer—peacemaker—censor for his district—frequent attendant at the meetings of his District Society, and reporter to the House of Delegates, the individual Councillor has opportunities for helpful services that are offered to no one else (so writes the Secretary of the American Medical Association)."

While many new members have been added to our list during the year, there must still be a considerable number of eligible practitioners within our jurisdiction who should be enrolled in this Association.

Suggestion is therefore made that a city-wide canvass be taken so that all who are entitled to membership may be urged to join.

Another matter which I desire to draw attention to tonight is the seemingly careless and thoughtless attitude which not only we but the other members show toward the official organ of the State Society, the Rhode Island Medical Journal.

Never before has this worthy magazine with a circulation that increases every month been upon such a sound financial basis and this success has been attained by the painstaking efforts of its editor-in-chief and his corps of worthy assistants. But it needs the help and assistance of every member of the profession in Rhode Island. It is over the top and it is up to us to keep it there. Its reports and news items are of the highest interest and its advertising columns should be a ready directory for reference when buying or securing professional help.

While all matters of interest to the profession will be gladly received, such information as that of deaths, marriages, births, removals, appointments and reports of extended trips by members will be most welcome.

Much interesting material can be gleaned from hospital clinics, so clinic heads are urged to see that their internes report unusual cases and accounts of necropsies so that they may be published in the Journal. To this end I am informed a movement is now on foot to establish in all the general hospitals in the State a bureau representative of the Rhode Island Medical Journal, whose business it would be to render case reports and news items that would be of interest to the readers.

Through the persistent and businesslike efforts of the advertising manager, following the same policy as outlined by the *A. M. A. Journal,* all advertising is of the Class A type and surpasses many of the leading medical journals of the country in the number of its advertisers.

Special attention is also called to the new features of the Directory—providing for advertising by dentists, druggists and experienced nurses, thereby affording an easy reference for physicians when in need of such services. This addition has recently received favorable comment from the *A. M. A. Journal* of advertising.

As this source of revenue contributes largely to the support of the Journal and those who have given their advertisements expect some return from the profession, I urge the members of the Society to give the advertising patrons of the Journal their first consideration when purchasing, for by so doing they are assisting in no small degree and can rely upon obtaining goods of standard quality. Be sure and mention the Journal when buying.

Now that I am about to turn over the office of President to my worthy successor, I take this opportunity to express my appreciation for the good will and forbearance with me that you all have shown while acting as your presiding officer. I also desire to thank my brother officers for the kindly co-operation they have extended me, and, with best wishes for the future welfare of the Society and a Happy and Prosperous New Year to you all, I shall step down and give place to a much more worthy incumbent.

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EDITORIALS

GROUP PRACTICE.

Although the system of practicing medicine by the group method is spreading rapidly throughout the United States, it has not as yet invaded Rhode Island except to a very limited extent. We venture to suggest that local medicine is fortunate in not having succumbed to the latest idea in medical practice.

Group practice is as old as the science of medicine itself, and dates from the Greek era, where it was practiced under ideal conditions. At first thought it is so fascinating in its concepts as to be well nigh irresistible. The patient is brought before a group of physicians, each one skilled in a particular branch of medicine. His symptoms are carefully studied and a complete physical examination is made. Is it possible that he should receive any advice except the very best known to modern medical science? Under ideal conditions, the answer is—No.

We are living and practicing under far from our ideal conditions. In group practice as at present established, a group of younger men, each specializing in some particular line, is brought to-

gether by an older and well established man, often times a surgeon. The clinic may even take the name of the older man, and be carried on largely for his benefit. It provides an easy method of having laboratory and X-ray examinations performed with the least inconvenience to both patient and surgeon. In sizing up a patient as a surgical risk, it is an ideal arrangement to have the examinations of heart, lungs and kidneys and the search for foci of infection carried on under one roof.

There are two evils of group practice as at present carried on, which seem to us to outweigh its many advantages. When in need of consultation, the members of the group will naturally consult with one of his group confreres rather than pick out some colleague in his city who is perhaps much better fitted to pass upon the particular case in question. In this way the patient is not receiving the best advice that it is possible to obtain. It follows from this that many consultations will be held and laboratory examinations made which are more or less unnecessary, and the patient subjected to additional expense and loss of time. No one wishes to deny a patient all necessary aids to diagnosis, and it is false economy to fail to employ every means in our power to arrive at a complete and satisfactory opinion in any obscure or puzzling ailment. Perhaps the greatest evil of all in this system is the tendency to a weak-kneed policy of "passing the buck" on the part of the physician who is handling the case. He is often in a better position to arrive at the proper solution of the case, unaided except by his own thoughts and experience, than when confused by the unripe suggestions of a lesser experienced but well meaning colleague.

There is a feeling which is fast gaining ground among the profession today that we are suffering from too much laboratory experience; that it may be a hindrance as well as a help, and that what is most needed in medical practice is the fruit of a broad, well rounded experience applied to the problems of diagnosis and treatment. In other words, we should attempt to emulate the skilled senses of the masters of medicine who have left us a rich heritage in the way of accurate and comprehensive observations of disease. Medicine must and always will have a personal contact, which cannot be delegated to another except in small part.

Dr. Martin H. Fischer of the University of Cincinnati has put the thing well when he says, "The modern doctor has sacrificed his individuality—the thing through which alone he has gained his public standing historically or in the present. Never before has he affected a community through mass action, and it is safe to predict that through such action he never—lastingly—will."

Dr. Fischer likens the service of the group clinic to that of the cafeteria, in which one can serve oneself to a diagnosis as one serves oneself to a meal:

"One starts with a numbered card and buys himself at different counters and from different men a general examination, an investigation of the throat, a Roentgen-ray plate of the gallbladder, a dental overhauling, a surgical operation, and a plaster cast for the foot. Each item carries its price, which is punched on the ticket. What the scheme takes no account of is that the patient does not care whether he has Hirschprung's disease, erythema nodosum or pseudohypertrophic muscular atrophy. What he is after is a plain statement of what is the matter with him, and whether he can be 'cured' or not; also there is wanted a little appreciation of his state of mind and some understanding of the economic hardships of his family in the interim of being ill. The food counters do not carry these dishes."

"The medical profession," Professor Fischer says, "will increase or lose its public power only as the collective expression of the people's faith in the individual doctors who touch them." The greatest medical achievements were not those of men working in great organizations, but of individuals utilizing to the utmost each his own opportunities. Boerhaave changed all of European medicine with twelve beds. Corrigan rewrote the chapter on heart disease with only six, and Kulz, whose work fills one-third of all the volumes on diabetes, had only two patients. It is time for the medical profession to discard the commercialism and the selling methods of the store, and to return to the methods of the fathers in medicine. It is a time for physicians with kindliness, tolerance and large understanding, the skill of hands, the skill of mind and the resourcefulness of previous generations.

THE FUNCTIONAL FRINGE OF ORGANIC DISEASE.

In our attempts to evaluate the baffling complexity of symptoms, nothing is more difficult than the separation of those which are due to some organic change from those others, always present in greater or lesser degree, which one may call the "functional fringe." It is the commingling of these disparate things which makes, for mature minds, experience fallacious and judgment so often difficult. And moreover, the variable response to treatment of these two elements in our clinical problems gives to our therapeutic results not a little tincture of the unpredictable. We are always in the midst of contingent happenings which surprise us, and when we most desire medicine to be an exact science we discover that, after all, it persists in remaining an art.

This functional fringe, if such we may call it, seems to attach itself to every sort of organic disorder. Name any organic disease you will and then try to separate from the patient's complaints those which are due directly to the organic process itself, whatever it may be, and those others which do but symbolize his mental, emotional and nervous reactions to his disease. The other day we listened to the pleasurable instruction of one of our colleagues who was telling us about the "Treatment of Diabetics." He began by saying that he had chosen the title of his address advisedly, and was going to speak about the treatment of diabetics and not about the treatment of diabetes—a very different matter. As he described his experiences it was obvious that he had in mind to treat not merely or solely a certain content of blood sugar, but a living, worrying, hoping, fearing and frequently despairing human being. Especially important, he said, is the effect of emotion upon the diabetic's progress or dissolution, the effect, that is, of the functional fringe. If this functional component of the total symptomatology is not discovered and cared for, the most painstaking chemical treatment of diabetics will be robbed of its efficacy.

In cardiac disorders it is the same story. What are the symptoms which result directly from a damaged and incompetent myocardium? and has anyone ever seen these in isolation? Perhaps most of us will agree that even in cardiac patients, the most distressing symptoms are often owing to the functional fringe which clings to the patient's mind. The fear of invalidism and of death, the weary weight of unresolved moral struggles, and the hundred and one apprehensions which disturb the sleep of these patients, are not these functional troubles quite as important to treat as is any fibrillating auricle whose disturbing influence can be appeased by digitalis? In our very language we have recognized this, for what else do we mean when we speak of being light-hearted and downhearted and heart-sick and heart-broken? Well then may one contend that ministering to a mind is often the best of cardiac tonics, not indeed that it displaces pharmacology, but rather supplements and improves it. If a weak heart is constantly in the track of emotional storms it is vain to expect improvement from treatment directed to the heart as a pump. And how many "weak hearts" does one recall which have been strengthened by removing an anxiety neurosis?

As in cardiology, so in gynecology. Given, let us say, some pelvic inflammation or new growth; how shall we apportion the symptoms between the pelvic pathology and the superimposed nervous manifestations? And what is most important for our professional reputations, how much and what kind of relief shall we promise our patient from operative measures if these are thought to be desirable? It is no fault of our good intentions, but the perplexing difficulties of the problem itself, which sometimes leads us to promise rather more from surgical measures than they can in reality supply. It is no good, from the patient's viewpoint, to remove most of the contents of the pelvis, if the functional fringe of neuroticism is thereby aggravated. Not to labor the point further, it must be apparent that a somewhat nice discrimination is required to decide the relative values of the functional and the organic symptomatology in a given instance. Specialism as it exists today, particularly the specialism *in excelsis* which has isolated itself from the broad stream of general medicine, is unable to do this; hence the perennial need, now more than ever, of the practitioner of general medicine. It will be a bad day for the profession and for the public when the general practitioner is deprived of the emoluments and the dignity which are his due. He it is who can view and treat a patient as a unit, not as a collection of fragments which are so pathetically handed about

among the specialists. Even when he wishes to be a specialist, his patients try to dissuade him from it, for instinctively they feel, perhaps from experience they know, that he is about to narrow his horizon. Hence the point of our remarks is this—that our assumed precision of symptomatology is in many ways illusory; that when confronted by a patient in the flesh and not in a book, we are more frequently than not unable to distinguish organic symptoms from their functional fringe; that precise diagnosis and treatment are dependent upon this distinction; and finally, that only when the general practitioner undertakes this kind of research shall we obtain the knowledge we need so much, for the general practitioner, and he alone, has the material with which to work.

THE SAMARITANS.

The National Conference of Social Work holds its Fiftieth Anniversary Session in Washington, D. C., on May 16th to May 23rd. This event should emphasize to the medical profession the importance of Social Service, which is a work that has risen already to the height of a profession itself. A labor characterized by giving help to suffering humanity, done with the primary object of service rather than financial gain, directed by the highest ethics and requiring a considerable degree of training. Surely such a work is entitled to be designated as a profession. Going about doing untold good, the members of this new profession are attached to the modern hospital, the District Nursing associations, the various charitable organizations, the public schools, the courts, the Red Cross and the State institutions.

The attention of the medical profession is called to this group of workers because so much of its effort is directed to health work. Many hospital problems have been solved by the aid of a sympathetic social service worker who acts as the go-between from the institution on the one side to the individual home on the other. The State has come to recognize the economy that is accomplished by individual investigation as carried on by Social Service workers, both in helping to keep the family or its members from becoming charges of the State and in restoring to the home or to independent endeavor, individuals who might otherwise remain State charges. Many fields of endeavor are lessening the burden formerly carried by the family physician and of these the effort of the Social Service worker is by no means the least. She is worthy of her hire, in fact more worthy than we at present realize, and her relation to the work of the physician is second only to that of his closest helper, the trained nurse.

With these facts in mind, the members of the medical profession, and there are many who direct institutions where Social Service is a department, should consider wherever possible, sending representative workers to the National Conference, which is to Public Welfare what the Annual Meeting of the American Medical Association is to the medical profession.

CHIROPRACTIC PHILOSOPHY.

By Malford W. Thewlis, M.D.
Providence, R. I.

At Davenport, Iowa, there is a school which has become the most gigantic institution in the world for the teaching of mountebankery and which commands attention as one of the most pretentious pieces of fakery we have ever witnessed. It gives men with no education a pseudo-medical veneer which enables them to plunder the sick; it teaches them to despise the serious works of our greatest masters, to rely upon the appalling ignorance of our masses, to use every means of salesmanship in order to reach them, to spread a venomous propaganda against the medical profession; this school boasts of "the prettiest printery in America," of a powerful radiophone which broadcasts lectures on chiropractic "education" every afternoon, and of an organization utilizing every political means to gain legal recognition of their sect in the various States of the country.

We refer to the Palmer School of Chiropractic, if not interesting at least a highly entertaining organization, the parvenu at its "fountain head" is depicted by Hugh Harrison (?) as the "greatest healer of the sick since Christ." Harrison gives you a complete biography of "B. J." (Palmer), as his devoted disciples call the man. He tells us that Palmer's favorite author is Elbert Hubbard. "I don't care much for the average writer, because he is not practical, and their writings do not apply to everyday life," says the wizard of Chiropractic. A glimpse of "B. J.'s" picture, with his long hair

and beard, is disquieting; he seems ready to play the leading role in the Passion Play.

Day and night, under the very eyes of the medical profession, laws are being enacted which allow these charlatans to practice medicine on a level with physicians, to treat all kinds of diseases, including contagious ones, to sign death certificates, and there are laws which permit licensing boards to examine the applicants. There are now 5,000 chiropractors in the field and Palmer says "I look to see the time when this institution will graduate 25,000 students a year." There are 3,000 students in the Palmer School of Chiropractic now; as Kipling would say, the men are "machinely crammed."

Some time ago in Paris, a few Americans opened a Christian Science healing establishment and within a few hours the police closed its doors. There, at least, no one can treat the sick without a medical education. In America, it is different. There is no country in the world where health is exploited for commercial purposes as it is here. Any freak with a beard and a flow of sparkling language seems to appeal to the people.

Chiropractic is defined as "the philosophy, science and art of things natural, and a system of adjusting the subluxated vertebrae of the spinal column, by hand, for the restoration of health." It was founded in 1895 by the late D. D. Palmer and the first chiropractic adjustment was given in 1895 to a man of impaired hearing. "An analysis of his spine disclosed a pronounced subluxation in the upper region of the spinal column. By adjustments the misaligned vertebra was restored to its normal relations and soon the man could hear as before." B. J. Palmer is the developer of Chiropractic, and, according to his biographer, Hugh Harrison, "his only education had been in the School of Experience. He had never finished high school. . . Three live rats had chewed off the thread of his educational career. He brought the rats to school in a cigar box, one of his typical boyish pranks, and the principal, J. R. Baldwin, expelled him. The same teacher in later years enrolled in the Palmer School. He studied under B. J. Palmer and became a practicing chiropractor. The boy he expelled had taught him a science which he valued above all his learning." A powerful ray of light is thrown on Palmer's teachings by his dissertation on germs. "The germ is an established fact. That he is, that he exists, is indisputable. You have rats around garbage barrels, too, but they don't put the garbage there. They're scavengers, drawn by the scent of decay. So are germs. There is not a single germ in the world that ever caused dis-ease. Physicians say there is. They try to wag the dog by the tail."

The Palmer School of Chiropractic does not even require a common school education for admission. They demand 18 months of study, 4,103½ class hours, in order to give a degree of D.C. (Doctor of Chiropractic) and Ph.C. (Philosopher of Chiropractic). The tuition is $450; they have a faculty of about 36 and teach philosophy, anatomy, technique, symptomatology, histology, physiology, gynecology, neurology and chemistry, general chemistry, orthopedy, hygiene and public health and spinography. One of the most important courses is that of salesmanship, which is conducted by "an experienced advertising and sales-manager." It teaches the chiropractor how to "sell his goods, and to keep himself sold." (*Sic.*) They have free clinics, fraternal organizations, a band, an orchestra and a barber shop. The dean is an M.D. besides a chiropractor and "offers to the student body and their families every possibility of high class medical attention when such is necessary. Maternity cases are not handled by chiropractors and should such services be needed while our students are in attendance here, they have in Dr. Hender a man of exceptional ability along this line, whose record is his best endorsement." Yet Palmer says "the M.D.'s and the Chiros will never mix."

Now, may I ask you to indulge in the perusal of a few phases of chiropractic propaganda? I wish to show how Palmer spreads his teachings. First, the printing presses supply chiropractors with all kinds of material for their advertising campaign. "Nowhere else can the public obtain the authentic principles of Chiropractic as well as through the publications issued by our printery; in no other way would the millions of diseased and suffering people ever have heard of Chiropractic except through the herculean efforts of our printery. Our printery is the power behind the bright light of truth, which throws its protecting rays over a world filled with earnest seekers after health."

By means of a masterpiece of trickery, Palmer

is now reaching the firesides of thousands, at a very small cost. This is done by means of a radiophone which broadcasts messages daily. Is it done officially under the auspices of the Palmer School of Chiropractic? No, it is a camouflage. They are using the medium of one of our most honored and trustworthy fraternal organizations. Letters are sent by the grand lodges of this fraternity to every lodge under its jurisdiction, informing the members that radio messages will be broadcasted on "The Brotherhood of Man." The secretary of the lodge is expected to read the letter to members in open meeting. The station is WOC, which happens to be Palmer's school, and the message is not delivered under the auspices of the fraternity above mentioned, but of Palmer. The scheme appears innocent, singers, teachers, lecturers and "celebrated" persons transmit their messages, to say nothing of the government weather forecasts and trade reports, which are daily cast forth. *Timeo Danaos et dona ferentes!*

In Palmer's entrance into the home we are dealing with a new wooden horse of Troy. Thus far, the messages do not refer to chiropractic, but Palmer's catalogue reveals the truth. One sees that in addition to the above messages, Palmer broadcasts "educational matter on the subject of chiropractic each afternoon at 3:30, Central Standard Time, and to these talks chiropractors invite their patients to listen in that they may learn more about the science. A copy of our printed program is furnished free each week on request." The catalogue further reveals:

"As a Palmer School graduate, can't you see the advantages of Palmer radio broadcasting? Just picture yourself as a practicing chiropractor, being able to invite the prominent people of your city to your office each afternoon or evening to be entertained by your radio set. Imagine the many new friends and patients you will acquire by this courtesy. All this can be yours by simply having a receiving set installed in your office, the cost of which will be hardly more than that of a phonograph."

Almost anything can be sold through clever advertising and Palmer realizes it. The medical profession is too engrossed in its serious work to dabble in medico-politics. It has always been considered beneath the dignity of the medical profession to use political influence. Our requirements for a medical education increase every year, as they should, our medical schools have a high standard throughout the country. We shall probably see the day when physicians will be forced to obtain a new license each year (New York has a bill before its legislature now for this purpose) and perhaps the time is not very remote when physicians will be re-examined yearly, and those who are inefficient forced to drop out.

While all these advances are being made in scientific courses, the pseudo-medical cults are allowed to practice medicine on the same ground as physicians. Preliminary education is of no moment as far as they are concerned and a man or woman can get a "degree" after eighteen months of "study."

For the good of humanity there should be a law —as there is in France—explicitly stating that no one can treat disease without a medical license, that each applicant shall pass the same board, such as the Board of Regents of New York, or the State Board of Rhode Island. There should be no other examining boards to cover these cults. In France, it is impossible to get a license to practice medicine without taking the regular medical course at a faculty, besides spending two years in hospital work and then passing a very rigid examination.

It has been said that the best method to combat the healers was to educate the public. The public will not be educated, it loves mystery, it has little regard for the discoveries of scientists. We all hear of the radiovibration of Abrams, the "adjustments" of chiropractors, the poison of the Heloderma monster as a cure for locomotor ataxia, the Friedmann serum for tuberculosis, to say nothing of the gentle cooing of Coué. Such mindstuff will always fascinate the readers of the Sunday papers, but it is puzzling to realize that some really educated people also "fall in" for these medical fads.

(The foregoing is interesting in the showing of the versatility and insidiousness of the publicity management of the Palmer School of Chiropractic. That said management should, however, have the audacity to so openly direct its efforts toward what is, without question, the greatest humanitarian and semi-ecclesiastic brotherhood that the world has ever known, is indeed a presumption that is as marvelous as it is graceless.—Ed.)

ANNOUNCEMENT

To the Editor:

Will you kindly publish in your JOURNAL the following information concerning examinations by the National Board of Medical Examiners:

Part I, June 25, 26, 27, 1923.
Part II, June 28, 29, 1923.
Part I, Sept. 24, 25, 26, 1923.
Part II, Sept. 27, 28, 1923.

All applications for these examinations must be made on or before May 15th.

Further information may be obtained from the Secretary, Dr. J. S. Rodman, 1310 Medical Arts Building, Philadelphia, Pa.

Very truly yours

J. S. RODMAN, *Secretary*

NOTES

During the week of March 19th, Dr. Anthony Corvese visited the Mercy Hospital at Pittsburg, Pa., witnessing the radium treatment in gynecology by Dr. Wiess.

MISCELLANEOUS

PAGE LINCOLN STEFFENS.

March 14, 1923.

Dear Doctor:

Mr. ——— was examined in our office January 18th, 1923. He was examined by the White B.D.C. color system. His diagnosis showed a low lying T. B. condition, systemic; incipient carcinoma; heavy gonorrhea reaction. His bowels show very pronounced autointoxication and anemia is also present. Kidneys overworked, liver bad. Also showed old grippe toxic. The general toxins are so high and active in this case, I am afraid the outlook is not very favorable.

If I can give you any further details I will be happy to do so. Please pardon this delay in answering.

Respectfully yours

——— — ———

(The above letter was received by a colleague and forwarded to the JOURNAL. Signed by a Boston practitioner, said to be a disciple of Dr. Abrams, and is the diagnosis of a presumed illness. All we can say is, that as the diagnosis does not show the presence of a broken leg, erysipelas, ingrowing nails or a recent hair-cut, the "patient" need feel no discouragement unless some sickness should develop.—Ed.)

SOCIETIES

PROVIDENCE MEDICAL ASSOCIATION.

The regular monthly meeting of the Providence Medical Association was held at the Medical Library, 106 Francis Street, Monday evening, April 2, 1923, at 8:45 o'clock.

Program: Paper—"Pyorrhea: Its Cause and Treatment," M. L. Mullaney, D.D.S. The discussion was opened by Dr. Frank E. Peckham.

Case reports by Dr. F. M. Adams, Dr. A. A. Barrows, Dr. A. T. Jones, Dr. H. J. Connor.

Collation followed.

DR. PETER PINEO CHASE, *Secretary*

BOOK REVIEWS

DISEASES OF THE THYROID GLAND, BY ARTHUR E. HERTZLER.

C. B. Mosby Co., Publishers.

A careful study of clinical history before and after removal of thyroid and microscopical study of glands removed. This is a remarkably clear and concise description of the normal and pathological anatomy.

His study of the symptoms accompanying the various anatomical changes throws doubt, whether or not he so intends, upon the theory that thyroxin is the only active agent in the incretion of the thyroid. The difference in the results of diseases affecting the acini as contrasted with the interstitial tissue certainly indicates that each produces an effect upon the life of the individual which the other does not. If this is true thyroxin is not the equivalent of the whole gland.

The thorough study of a limited number of cases brings out much of value which is not obtained from great masses of material just as the observations of a large number of cases helps check the results of greater detail in the study of a few cases.

The chapter on symptomatology is clear and practicable, briefly discussing the various signs and symptoms presented especially by the eye, cardio-vascular and nervous systems. He takes a conservative and rational view of various tests and symptoms as related to diagnosis, though his study, being from a surgical standpoint, does not take up the diagnosis of the more moderate variations from normal which are seen by the clinician. He has himself studied a sufficient number of cases to have a definite concept of thyrotoxicosis and appears able to recognize the disease and then study the symptoms rather than, as does the general practitioner, study the symptoms and then make a diagnosis of the disease.

The chapter on prognosis, including the value of statistics, is conservative and practical. The chapters on treatment are from the point of view of the surgeon and as such are very conservative, concise and comprehensive. As regards the X-ray treatment he has apparently seen only the cases which were not cured and his statements are not conclusive to those who have seen the cases which have been cured.

He acknowledges that all cases are not cured by surgical treatment. Following surgical treatment we may have myxedema or a recrudescence of the disease in the portion of the gland not removed. Hence the indictment that all cases treated by X-ray are not cured is no more than can be said against surgical measures. It is probable that later it can be better determined which cases are amenable to X-ray treatment and which require surgery and in the meantime the results of both methods need further study.

The whole book is an excellent and concise treatise on the thyroid from the surgeon's standpoint and well worth perusal by all interested in the thyroid and of study by those not familiar with the subject.

"CROSSEN'S DISEASES OF WOMEN"

934 Engravings, including 1 Colored Plate.

By Harry Sturgeon Crossen, M.D., F.A.C.S.

C. B. Mosby Co., Publishers.
1922.

The field to be covered by the modern practitioner of medicine is so extensive and the amount of time involved in "keeping up" is so great that one naturally hails with delight any work that comprises between two covers a comprehensive survey of the subject to which it is devoted.

We have in Crossen's Disease of Women, fifth edition, just such a work. The student who reads it carefully will find in its pages all of the ground work so necessary to a thorough understanding of gynecology, while the busy practitioner and even the specialist will do well to refer to its pages for points in diagnosis and well thought out, rational treatment.

The book is extremely readable in the first place, and the wealth of excellent illustrations clarifies and enhances the value of the text. The arrangement is logical from start to finish. Under methods of examination, considerable space is devoted to pelvic pneumoperitoneum with X-ray diagnosis and to determination of tubal patency by insufflation of oxygen or carbon dioxide into the uterus.

It is to be regretted that more emphasis is not laid on rectal examination. This avenue of approach in pelvic diagnosis is too often neglected. The old saying that the only difference between a "good doctor and a poor one, is that a good doctor makes a rectal examination," is perhaps truer in gynecology than in any other branch and should be given the importance due it in a work of this kind.

The part of the chapter on displacements devoted to pessaries is very complete and very timely in these days when the pessary is too often neglected or improperly used.

The author will find some to disagree with his paragraph on radium in cancer of the cervix. To say with one breath that the results with radium in inoperable cancer are "marvelous," and in the next to hesitate to use it in the so-called operable cases, is hardly logical.

The chapter on the internal secretory glands in gynecology, with its timely warning against the indiscriminate use of animal extracts, could be read with great profit by the many who have been led astray by the floods of sensational and dangerously plausible literature that have deluged the profession in late years.

Altogether, the author is to be very heartily congratulated on the book he has produced and the medical student and practitioner also on having such an extremely satisfactory work to refer to.

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ORIGINAL ARTICLES

TUBERCULOSIS OF THE UPPER AIR PASSAGES.*

LEWIS B. PORTER, M.D.
PROVIDENCE, R. I.

The great majority of tubercular lesions seen in the upper air passage are secondary to pulmonary lesions. Our literature contains frequent reports of primary tuberculosis and undoubtedly it exists in a greater percentage than has been accorded it. Carmody, of Denver, Colo., in an article on "Oral Tuberculosis," from which I shall freely quote, says, "That the mucous membrane of the oral cavity has not been attacked by disease with greater frequency has been a marvel for ages. The theories advanced to explain this apparent immunity are many: first we have the rich blood supply to the parts; second, thickened layer of epithelium; third, the constant movement of the tongue and cheeks, keeping the parts clean; fourth, the supposed germicidal activity of the salivary secretions; fifth, mechanical protection offered by mucous; sixth, protective action of various bacteria in being antagonistic to other organisms." Carmody gives the following forms of tuberculosis of the mouth: 1. Nodes and nodules. 2. Tuberculoma or tubercular gumma. 3. Tubercular abscess. 4. Tubercular papilloma. 5. Tubercular fissure. 6. Tubercular ulcer, lupus or tuberculosis. 7. Tuberculosis of salivary glands.

"Primary infection usually takes place through a solution of continuity of the epithelium, through either mechanical, chemical, or thermal origin, or through a cavity in a tooth in which the pulp has been exposed by decay. Cracks or fissures of the tongue or lips predispose to secondary infection. Nodular foci are very likely of lymphatic or haematogenous origin. Nodes appear on the tongue as small tubercles 1-4 mm. in diameter. The nodules or small yellowish lumps are produced by the fusing of several tubercules, which may be pinpoint or as large as a hazel nut. They ultimately break down or become calcified. It has been shown that tubercules may be absorbed."

"Ulcers may appear as fissures which in the early stages may be easily overlooked. Ulcers of the mucosa have the following general characteristics: 1. They are superficial and have a moth-eaten surface and covered by a grayish film. 2. They have a mildly red areola. 3. Edges are soft and irregular, the base is reddish and covered with granulation tissue, upon which small whitish tubercules seem to have been sown. The membrane about the ulcers is pale and flabby and may show tubercules scattered over its surface. Ulcers of the gums usually appear about the neck of a decayed tooth. Tuberculosis of the soft palate is apt to be an extension of tuberculosis of the pharynx or tonsils and usually appears very late in the disease. It progresses very rapidly so that the entire palate may be covered in 24 or 48 hours with tubercules. When located in the tonsillar region the ulcer may be deep and the tonsil may be wholly destroyed."

Tuberculosis of the Tonsil.

Weller of the Department of Pathology, University of Michigan, reports his findings on material from nearly 9,000 patients. He arrived at the following conclusions:

"1. The systematic search of a limited number of microscopic sections, so oriented as to show in each the entire surface of a vertically bisected tonsil, is the only practicable routine method for detecting tonsil tuberculosis.

"2. The incidence of active tonsil tuberculosis in a series of 8,697 consecutive cases was found to be 2.35 per cent. This minimum figure would have been increased by an unknown, but probably small, amount if it had been possible to examine all portions of each tonsil.

"3. The incidence in respect to sex shows tonsil tuberculosis to be slightly more common in females than in males at practically all ages.

"4. In the series of 204 positive cases here reported, the range of ages was from 2 to 59 years. The incidence in various age groups depends largely on the character of the population from which

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the material is derived, the incidence being particularly high in institutions for the care of children and among medical students, internes and nurses.

"5. Tonsil tuberculosis may be divided into three types: focal crypt infections, ulcerative lupus-like lesions; and diffuse miliary tuberculosis.

"6. The crypt infection is the most common type, is usually unilateral, involves one or more crypt areas only and avoids the lymph follicles. Some of these cases are autoinfections in open respiratory tract tuberculosis but the majority must be considered cases of primary focal tonsil tuberculosis.

"7. The ulcerative lupus-like lesions result from the coalescence of crypt infections at the mouths of crypts or from direct extension from neighboring surfaces.

"8. The diffuse miliary tuberculosis is usually a bilateral or, if the pharyngeal tonsil is examined, a universal tonsil lesion. The tubercles are widely scattered and occur almost exclusively in the follicles and germ centers. This type can best be explained as a hematogenous miliary dissemination.

"9. Mixed types occur, as in patients with open pulmonary tuberculosis, in which autoinfection may be associated with hematogenous miliary tuberculosis giving a combination of crypt infections with diffuse miliary tubercules."

Lupus is a chronic tubercular disease of the skin and mucous membrane, and has special clinical features. It is characterized by the formation of nodules of granulation tissue, forming dark red or brown papules. It is slow and insidious in its development and is not necessarily associated with pulmonary tuberculosis. It passes through a number of phases and terminates by ulcer or atrophy with scar formation. Lupus of the upper air passages is nearly always secondary to lupus of the face, rarely is it primary. It appears as small nodules of new formed tissue, somewhat like granulation tissue, containing small spheroidal and large epithelial and giant cells. The tubercle bacilli appear in very small numbers. On the skin there may be an excessive production of epithelial cells over the infiltrated area or an ulceration of the new tissue.

The skin lesions are encountered more often than those of the mucous membrane as these cases usually fall into the hands of the dermatologists. Girls about puberty seem to be most frequently affected. Lupus of the mouth, either primary or secondary, is rare.

Lupus of the nose generally appears on the anterior portion of the septum or skin margin in the form of small nodules which coalesce and ulcerate and may disappear by absorption. The repair is feeble and usually leaves a pale blue smooth scar. The ulcers often reappear and may continue years without spreading. The nodules are firm, well marked and rarely attack cartilage or bone. Spontaneous recovery is exceptional. More commonly we have a non-ulcerative, exceedingly chronic patch with areas of cicatricial tissue scattered through it. When the disease attacks the end of the nose it will cause it to shrink up and convert it into cicatricial tissue.

Tuberculosis of the nose is a rather rare condition and appears in two forms: (a) a hyperplastic form, which is a round cell infiltration leading to tissue masses, the tuberculome, and (b) the ulcerative form. Both types are sometimes seen in the same nose. The ulcers are superficial, irregular, nodular, and covered with crusts. They bleed easily when probed and are painless, heal and break down.

Chamberlain's classification of nasal tuberculosis which he claims is the one generally adopted, is that of Zarniko. He speaks only of nasal tuberculosis, which he classifies in two main groups; first, the ulcerative, occurring as an end infection in emaciated individuals and complicating a preceding process in lungs, pharynx or larynx. Second, the tuberculoma or proliferative type, usually regarded as primary, and met with in strong, robust individuals, giving no other evidence of tuberculosis. The divisions made by others he regards merely as variations under the latter group. Individuals with nasal tuberculosis usually complain of nasal obstruction. There may be a purulent secretion accompanied by slight bleeding with crust formation. Chamberlain has found pain to be rare except in the ulcerative form. The growth is apt to be unilateral and on the anterior part of the septum. The inferior turbinate, the nasal floor and lateral wall are less often the site of the lesion. Chamberlain further says that the tubercle bacilli are practically never found in the secretions and often not demonstrable in the tissues.

In diagnosis, nasal tuberculosis is most liable to be confused with syphilis. Zarniko calls attention

to the following differences: tuberculosis involves primarily the cartilage syphilis; the bone; second, fetor is rare in tuberculosis and common in syphilis; three, in tuberculosis there is no inflammation of surrounding parts, but marked inflammation of surrounding parts in syphilis; four, in tuberculosis, headache and involvement of the trigemminus rare, common in syphilis; fifth, tuberculosis is a slow process, syphilis a rapid one. Chamberlain further mentions the Wassermann reaction, the administration of potassium iodide, the injection of tuberculin, as well as the histological examination.

Zarniko calls attention to the fact that we may find syphilis in a tubercular subject and vice versa.

Dworetzky, who has had a large experience at the Otisville Sanatorium in New York, divides laryngeal tuberculosis into four types: the peracute, acute, subacute, and chronic. His description I will give verbatim:

"The peracute cases of laryngeal tuberculosis, fortunately, are infrequent compared with any of the other forms. These cases are very rarely seen in the stage of edema, but usually present extensive ulceration and perichondritis. They are often accompanied by tuberculosis of the faucial tonsils and soft palate. Dysphagia and aphonia are always present, especially when the pharynx is involved. Emaciation is rapid, the patient is febrile and soon becomes moribund. Other organs of the body, such as the intestines and meninges, are often also involved. The peracute type usually begins as such, although occasionally it follows the acute type.

"The acute type is characterized by a soft edema of the larynx with a tendency to ulceration. It may begin as such, or it may follow the subacute or chronic type. It usually occurs in the advanced cases of pulmonary tuberculosis, often in moderately advanced cases, and occasionally in incipient cases. There is little or no tendency to fibrosis. Nodules consisting of tubercules can often be seen projecting above the surface of the mucosa. When the tubercules caseate they give rise to ulcers. During the stage of caseation the nodules often coalesce, with the production of extensive ulceration. The patient usually suffers from marked hoarseness or aphonia, a sensation of fullness in the throat, and irritation with a constant desire to expectorate. Dysphagia is of common occurrence and may be very pronounced, depending on the location and character of the ulcerations.

"The subacute type is characterized by a semiedema of parts of the larynx with a moderate tendency to fibrosis. It may begin as such or else follow the acute or chronic type. It takes a subacute course, has a tendency to healing and is usually benefited by treatment. Lesions with papilliform infiltrates and soft polypoid excrescences generally belong to this type. The local symptoms may be slight or moderate, depending largely on the site and extent of the lesion. Hoarseness, as a rule, is present, particularly when the true vocal cords or the interarytenoid sulcus is involved. Dryness of the larynx is generally complained of, and more so when the fibrosis is extensive.

"The chronic type offers the best outlook, and is characterized by firm infiltration of part or parts, with a marked tendency to fibrosis and healing. The lesion, due to an extensive proliferation of connective tissue cells, is usually limited in extent to the affected areas, and may remain so for an indefinite period. These patients suffer very little, and often, with the exception of occasional dryness in the larynx and slight hoarseness, have no symptoms at all. For this reason this type is very often overlooked.

"In rendering a prognosis in laryngopulmonary tuberculosis, although all other factors, such as character and extent of the pulmonary lesion, the general condition and mental condition, early diagnosis, etc., should be considered, the chief determining factor is the character of the laryngeal lesion itself. For it very often happens that a patient will be given a good prognosis based on his pulmonary lesion, only to have the prognosis changed when it is discovered that he suffers from an acute involvement of the larynx as well.

"The summary of my observations on the prognosis in laryngopulmonary tuberculosis, therefore, is as follows:

"In peracute cases, with or without involvement of the pharynx and regardless of the pulmonary lesion, the prognosis is bad, and the life of the patient is from a few weeks to a few months. Here, as a rule, the patient dies from an overwhelming toxemia and from inanition caused by dysphagia. Local treatment is of no avail and is not indicated except for the relief of pain. Our aim should be to make the patient as comfortable as possible.

"Acute cases often improve under skillful treatment, and when the pharynx does not show microscopic involvement and the pulmonary and general

conditions are at all favorable, the prognosis is not hopeless. These patients should be kept under a careful regimen and persistently treated generally and locally. They often improve and occasionally become completely cured.

"The subacute cases present a good outlook, and the prognosis depends a great deal on the pulmonary lesion and timely treatment. With good general care and with proper local treatment the laryngeal lesion becomes fibrosed and chronic.

"The chronic cases present the best outlook. Patients with this type of lesion usually get along best under general treatment alone. The prognosis as to life is hardly ever influenced by chronic laryngeal tuberculosis, and therefore in rendering a prognosis in these cases the larynx may be entirely disregarded."

St. Clair Thomson, who has had extraordinary experience in the treatment of tuberculosis, when asked upon what signs he depends outside of active ulceration, replied, "The chief thing in diagnosis is the skilled eye of the diagnostician, because it is almost impossible to put down in words the condition that one sees. It is not only the conditions but the slight changes in these conditions with progress or temporary improvement. Briefly, pallor is a suggestive thing, whether pallor of the soft palate or of the epiglottis and larynx generally, though, on the other hand, particularly among men and among elderly subjects, congestion may be met with. Then I hold a great deal with comparing very carefully with one's eye the two sides of the larynx, because if there is a congestion or a catarrh or a thickening, such as a syphilitic infiltration, it is more likely to be more or less evenly disposed on both sides, whereas, if it is on one side, it is much more suspicious of tubercle. Then I think that the favorite spot to find an early tangible sign, what you call a physical change, is just about the vocal process, hidden to a great extent because it is low down on the laryngeal surface of the arytenoid, just where the arytenoid and the vocal process join one another. One has to see some patients several times to determine that the little hollowness there, the little solution of continuity, or a little crinkling, or a little infiltrated crinkling, is an early deposit. These are, of course, present in the later stages when there is ulceration and perichondritis—the thing is to recognize the early stages. Sometimes, of course, we have a change of voice, but I have records which will be published one day, of a considerable number of people who had no complaint of the larynx, whose voice was not changed, and yet who had distinct tuberculosis."

PYORRHEA: ITS CAUSE AND TREATMENT.*

By Michael Laurence Mullaney, D.D.S.
Providence, R. I.

I am grateful for the honor afforded me to appear before your honorable body, to give expression in the reading of a paper of a disease which is well known to you. Knowing your interest in all things which pertain to the anatomy of the human body, I hope that this paper, although dry and uninteresting to you, in comparison with other papers which treat of subjects more in line with your immediate work, will not be without some fruit, and not an imposition upon your time and patience.

The subject which I am to present to you tonight is one which is particularly interesting to me, and if I can impress upon some of the doctors present the fact that much of the peridontal disease which exists today could easily be prevented, and much of it cured, then I would deem the labor expended as work that was worth while.

The normal mouth is so made up that ordinarily it contains thirty-two (32) teeth, so arranged that the upper and lower teeth might be in co-ordination with their antagonists during the various movements of the mandible. The contact points give mesial and lateral support as well as serving at the same time, as a protection to the delicate underlying peridontal membrane.

There is, generally speaking, a triple function of the teeth, the first is called prehension, the second mastication and the third that which aids in speech.

At the gum line, which technically is called the cervical margin, we find a soft tissue which lies in contact with the enamel although it is not attached to the tooth surface. This is called the marginal gingiva. This tissue acts as a guide for the food passing from the tooth to the underlying tissues, thus preventing food particles from accumulating around the necks of the teeth.

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Beneath the marginal gingiva we find the cemental gingiva, which is attached to the cementum of the root, and affords a support to the marginal gingiva on the labial and lingual surfaces, as also it gives support to the marginal or the interdental papilla, between the various teeth.

The pericementum serves to retain the teeth in their sockets, by means of a series of delicate fibers which branch out in many different directions, thus holding the teeth in their respective places.

One set of these fibers we find functioning so that rotation is prevented, another set to resist lateral pressure, while you find another group which is helpful during vertical pressure. At the apex of the root, where it acts as a cushion, we find this pericementum broadening out. This membrane has also a tactile sense which becomes greatly developed during inflammation caused by any mechanical irritant.

Covering the root is the cementum and this acts as a protective agent for the underlying dentine. Acting as a support for the teeth and the above mentioned membranes is the alveolar process. Such, gentlemen, is a brief outline of the tissues which we are to consider this evening.

Until lately all diseases affecting the investing tissue of the teeth have been called pyorrhea alveolaris. Furthermore, all these diseases have been treated in the same way, hoping thereby to effect a cure. The term pyorrhea alveolaris, better known as Riggs' disease, has been understood to mean a flow of pus from the alveolar bone. In many cases we find pathological conditions of the membranes which give no signs of pus, and in those cases where pus is found, rarely does it proceed from the alveolar bone. Under the terminology adopted by the American Academy of Periodontology, the tissues which give their support to the teeth are known as "Periodontium."

There is another term which now has general use; it is "Periodontoclasia," and is used to denote the breaking down of these tissues.

These diseases are further classified by the manner in which they attack the tissue. All forms of periclasia are necessarily inflammations but still this inflammation is not always visible in each type. When it is found that the gingiva and the alveolar bone has wasted away, inflammation is visibly absent. This type is called ulatrophia, of which there are two kinds: traumatic and ischemic. In the traumatic type, it is found that the gums hold their normal color and show a recession of both gingivas, exposing the cementum. The ischemic presents a like condition with the exception that the gums have a pale color. The term Gingivitis is used when the marginal and cemental gingiva show redness, and has four subdivisions, namely: chronic, hypertrophic, indolent and phagedenic. In the chronic type the marginal gingiva is the color of a carmine red, with a swelling of both gingivas, with rounded crest, having no pocket formation, at the same time very sensitive, yet not painful, with possible pus formation. The hypertrophic presents the above conditions as found in the chronic, except that there is found a hypertrophy of the marginal and cemental gingivas.

A vermilion redness is found in the indolent type, with little swelling of the marginal and cemental gingiva and usually it gives great pain. While in the phagedenic, grayish white masses on the crest of the marginal gingiva are found, having the underlying gingiva a bright red color, fetor of breath, and excruciating pain.

The breaking down of the alveolar process is what is known is Alveolaclasia, and has two types, traumatic and atomic.

The traumatic type presents the following conditions, the teeth are loose, there is no pocket formation and the gingiva is red. The same conditions are found in the atomic as above related, but with a thickening of the marginal gingiva.

When the pericementum loses its continuity it is called Pericementoclasia and is characterized by the following symptoms: pocket formation, mobility of tooth, pain and tenderness, crest of the marginal gingiva rounded, microscopic pus formation, and absorption of the alveolar bone.

Adami has defined inflammation as a series of changes constituting the local manifestation of the attempt at repair of actual or referred injury to a part; also that inflammation is a reaction to either bacterial, chemical or mechanical irritants.

In the peridontal regions we find that while the bacterial element is present, it is secondary in importance to the mechanical factors.

Since the gingival tissue is highly elastic, it accommodates the increased fluids during inflammation, and because of the reserve force, it may remain unchanged as to position and size during inflammations of long standing. No tissue or cell is

normally in action to the limit of its power, since normal activity is greatly below what the cell is capable of performing, therefore irritants which are after all simple excessive stimuli up to a certain point, do not overtax and thus does not lead to disintegration of the cell or tissue.

Considering the pericementum we have a far different picture. It being located between the walls of greater density than itself, it cannot accommodate the result of the inflammatory reaction, and thus a continuation will cause the tooth to rise from its socket or cause an absorption of the alveola bone.

The alveolar process, on account of its dense and unyielding makeup, cannot accommodate the volume of fluid and dissolution rapidly takes place through the action of chemical irritants and the osteoclasts.

The etiology of periodontal diseases has been one of the most disputed points in the field of dental disease, because of the fact of the variety of causes concerned, together with the effort to establish one supposedly universal factor.

One authority has given one course, while another has given a different one, which may be true in some degree in a specific case under observation but quite untrue when applied to the whole subject.

The etiology may be stated as being a disturbance of function. The causes of periclasia are many and of endless variety of combinations. Yet they can be classified to make periclasia etiology comprehensible.

To begin with we must consider three fundamental hypotheses. First: the causes of periclasia are primary or inaugurating and secondary or non-inaugurating. This follows closely the accepted division of causes of general disease into predisposing and exciting, yet there is a difference. In the latter the exciting is the more important and that which we attempt to treat. While in the treatment of periclasia the primary or inaugurating is always the important factor.

In the past the profession has sought out a single cause which has generally been secondary and has attempted to treat these secondary causes by medication. The results obtained we know too well.

The second hypothesis is that the etiology is always compound. No one causative factor can of itself inaugurate any form of periclasia.

For instance in a case of suppurative periclasia, the susceptibility to bacterial infection depends upon the lowered resistance of the tissue. To make it possible for pyogenic infection of the peridontal tissue to take place, they must be lowered in resistance to a point where they are unable to ward off the invading bacteria.

This is brought about by one or several agencies, which, on account of the part they take in lowering the resistance of the tissue to a point where the bacteria may invade, we call primary factors. Only after such tissue depression do we note the action of the pyogenic bacteria, which constitutes a secondary cause. Again, the primary factors do not cause disease without the action of the secondary factors.

For instance, we find salivary calculus in mouths free from any form of peridontal disease. Pathogenic bacteria are found in every healthy mouth. Traumatic occlusion is at times found in healthy mouths, but if these foregoing elements are all found we are almost certain to have a case of suppurative pericementoclasia. The third hypothesis: the inception and cause of peridontal diseases are under the control of pathogenic and non-pathogenic forces.

While we might have in a mouth all the factors capable of producing disease, it can only be inaugurated when the pathogenic forces over-balance the non-pathogenic. The primary causes, with a few exceptions, are mechanical irritants. The functions of the teeth being mechanical, not chemical, it is logical to expect this. Abnormal systemic conditions may at times occur, as primary factors,—such as in scurvy, but such cases are rare.

Mechanical irritants may produce injury in two distinct ways. First by an abnormal force which effects the entire peridontal tissues. Secondly by an impingement or irritation at the cervical margin, which would transmit the injury to the deeper tissues. These two forms of irritants produce injuries widely different.

A crown which has no semblance of fitting the tooth at the cervical margin, yet whose occlusion is good, may be worn for years without any symptoms other than a slight gingivitis. On the other hand, the crown may be perfect in fit at the gingiva, but if the occlusion is faulty, it will cause pericementoclasia through trauma, or traumatic occlusion.

Among other primary causes are malocclusion, restorative defects, abnormal tooth form, habits of occlusion, impingement of restorations caused by faulty contact of teeth and improper methods of using the tooth brush. Chief among these and the greatest destructive agent is traumatic occlusion.

The secondary causes include abnormal tissue tone, chemical irritation and predisposing local conditions.

Systemic diseases, while they show at times a depressant effect upon the peridontal tissues, are always secondary. Some diseases present their symptoms upon the oral tissues, although they do not affect the health of the peridontal tissue. Diabetes and syphilis show a more marked effect upon these tissues than do other diseases. These diseases will not, however, retard the return to health of the peridontal tissues if the proper systemic treatment is being administered. Diet is considered secondary and although it undoubtedly is important, further work is necessary before anything definite can be held.

As stated above, traumatic occlusion is the chief offender among the primary factors. Occlusion has been defined by Angle as the normal relation of the opposing inclined planes of the teeth, when the jaws are closed. For this definition to be considered properly it must be taken for granted that the teeth are of such form that they will be in normal position during the various positions of the mandible during mastication.

As I have already said before, the teeth have the function of mastication. In all carnivorous or flesh eating animals the masticatory movements are hinge like, allowing no extensive lateral movement of the mandible. First, because the temporal mandibular articulation does not permit much lateral movement. Secondly, because of the excessive length of the cusps of the opposing teeth. In the herbivora, the effective mandibular movements are almost entirely lateral, the teeth showing very small cusps. In the omnivora the effective masticatory movements are hinge like, as well as lateral. The occlusal surfaces of the teeth consist of planes, ridges, grooves and cusps, so arranged that in unilateral movements, the cusps of the lower may glide between those of the upper teeth in various different paths, without interference. Since man is omnivorous, the human masticatory apparatus, while modified somewhat from the lower animals because of different habits of life, corresponds in general to mammalia of this class.

Most of the masticatory movements being lateral or nearly lateral, it is readily seen that great injury will be inflicted upon the peridontal membranes if the cusps of the opposing teeth are not in co-ordination. Traumatic occlusion is an abnormal occlusial stress which is capable of producing an injury to the periodontium. It may be had by interference of the oscillating movements of the mandible through abnormal relationship of the occlusal planes; by occlusal stress, delivered at an incorrect angle, by the opposing teeth or by the supra-occlusion of a tooth as related to the line of occlusion. All causes of traumatic occlusion present one of these three conditions. The first condition is observed in mouths where there is a decided lingual or buccal tipping of the roots of the bicuspids and molars. This causes an abnormal stress on the peridontal tissues of the teeth concerned.

The second point is illustrated in cases where a molar or bicuspid has tipped mesially, due to the extraction of another tooth in the same arch or failure on the part of a dentist to restore proper contact on adjacent teeth which it was necessary to fill. This condition is mostly brought about by the extraction of the first permanent molar. On account of it, erupting posteriorly to all of the temporary teeth, it is often neglected until such time as it is impossible to restore it to a condition where it will function.

Dr. Thaddeus P. Hyatt, dental director of the Metropolitan Life Insurance Company, after a recent investigation reports that in the examination of 5,000 adults, men and women in two different industries, he found 47% of the first molars, 17% of second molars and 14% of second bicuspids lost. This means that 78% of 5,000 people had traumatic occlusion, or were susceptible to it. Is it any wonder that peridontal disturbances are so prevalent?

The third factor is found in patients having extremely narrow arches, causing an elongation of one or all of the anterior teeth, or it may be caused by an infra-occlusion of the bicuspids or molars. High occlusial fillings will also come under this same classification.

In every mouth in which we find traumatic occlusion we find certain areas which are distinctly

marked but there is further, a circulatory disturbance of the pericementum resulting in a lowered resistance which finally produces a lesion; the most noticeable being a pocket formation.

When abnormal stress is exerted upon a tooth the alveolar crest acts as a fulcrum, therefore the crest and that portion of the pericementum lying just below, together with the marginal and cementum gingiva are the most affected.

The bone constituting the crest being very rigid makes it a point of resistance to pressure. In many cases the first tissue change will be the absorption of this crest followed by a circulatory disturbance in the marginal gingiva. This allows an infection of both gingivas. The tissue now being lowered in resistance allows a bacterial invasion of the pericementum, leading to superficial pocket formation.

Continued pressure on the alveolar process with its loss of function, through destruction of the pericemental fibers and the extension of the inflammatory process, causes a further absorption of the bone. This is coincidental with a further severance of the pericemental fibers. These phenomena are the factors in the formation of the typical pus pocket.

Treatment: Etiology has revealed that mechanical irritants, lowered resistance of the tissue, and invasion by pathogenic bacteria to be the outstanding features. In the treatment efforts are directed to the relief of the irritation, reduction of the bacterial count and stimulation of the vitality of the cell.

As traumatic occlusion is the greatest offender in the inaugurating causes, the first step is to restore it to normal.

The ideal treatment would be orthodontic, but this is impossible in most cases, first on account of the age of the patients usually affected, and second because of the time required.

The correction may be made by grinding the occlusial surfaces so that they will be in co-ordination. After this step has been completed all deposits must be removed from the teeth and attention given approximal contact points. All infected teeth are removed and restorations placed in cavities.

Instead of trying to reduce the bacterial count by medication as it has been tried in vain in the past, the elimination of the culture media is brought about mechanically by scaling the exposed root surface, removing all debris, hard and soft deposits and denuded cementum. These accumulations furnish a rich media and retain the bacteria in contact with the vascular tissues.

While the vascular tissues are the object of the attack of the invading bacteria, it is only possible when the tooth surface furnishes such a habitat that they be capable of proliferation.

Lost teeth are replaced by prosthetic appliances, special attention being given to the occlusion of the same.

Finally, the patient is instructed in mouth sanitation and how to obtain the best results with the tooth brush, it being used in such a manner that in addition to cleaning the tooth surface it will act as a stimulating agent to the gums.

CONVERGENT SQUINT IN CHILDREN.*

By Dr. James W. Leech.
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It is not my purpose in this short paper to discuss the various theories, however interesting, which have been offered as determining the causation of convergent squint, but rather to touch briefly upon what appeals to me of practical importance in our conception and treatment of this condition; and at the outset, may I emphasize the necessity of our impressing upon the laity and also upon those of our own profession whose activities in other lines preclude a wide experience in these cases, the importance of instituting treatment in convergent squint at the earliest possible moment. It has been the experience many times of all of us to be told that the nurse, or the family physician, has told the parents to do nothing about the "turn in the child's eye until 5 or 7 or 12 years of age." By what process of reasoning these particular ages have been selected as the proper age for beginning treatment, I have never been able to fathom, but suspect that it is a sort of defense reaction against assuming responsibilities.

The time to start treatment for convergent squint is as soon as possible after the first, often fleeting, suggestion of lack of parallelism of the optical axes is observed, even in the first year of

*Read before the regular meeting of the Ophthalmological and Otological Society of Rhode Island, April 12, 1923.

infancy. Manifestly, this does not apply to the motor inco-ordination of the eyes usually seen in the new-born. But given a history of deviation of one eye in a baby even of 6-8 months of age, I think treatment by the use of weak atropin solution, ¼% in both eyes for a week every month or two, with daily occlusion of the fixing eye should be begun at once. Such cases are fortunately rare and usually the squint does not make its appearance much before the second year—a period in child life which may be said to mark the incidence of the so-called diseases of childhood. And in this connection it is to be remarked that the frequency with which the observation is made that the squint appeared after whooping cough, measles, or a gastro-intestinal disturbance leads one to feel that while the diseases above noted are in no sense causative factors, nevertheless they do become contributing factors. I am inclined to believe that these contributing factors, by lessening body resistance and upsetting neuro-muscular control and co-ordination, permit the potentialities of squint to become actual.

In actual practice, our management of squint cases is roughly divided into two classes, i. e., young children up to 4 years of age in whom visual acuity tests are impossible and, second, those whose co-operation by reason of age and mental attainments makes the determination of visual acuity possible.

In the first class of cases, infinite patience is needed to make even the most elementary examination of alternate covering of the eyes, and ophthalmoscopic examination to eliminate fundus lesions which in the majority of cases would cause the abandonment of hope from treatment. A solution of atropin ½ to 1% three times a day should be used in both eyes for three days and the child returned for retinoscopic refraction. Incidentally, it is always wise to warn the mother of the possibility of atropin poisoning occurring, evidenced by extreme restlessness, wakefulness, delirium and flushing. With these small children retinoscopy is best done at arm's length, holding the successively stronger lenses in one hand before the eye for a few seconds until the mirror tells us the point of reversal has been reached. These little children will not tolerate for a minute the cumbersome trial-frames and I have found they become more quickly habituated to their spectacles if smoked glasses are furnished them during the period of atropinization. It is manifestly impossible and, I believe, in very small children of negligible value, to accurately determine the amount and axis of low degrees of astigmatism at this time, preferring to correct the major portion of hypermetropia and deferring the finer astigmatic correction to a later date.

In the older children, even those who do not know their letters or numbers, a fairly accurate estimation of the visual acuity is possible by the use of the "dummy E" chart, particularly if the examiner will give enough time and patience to stimulate the child's interest in it as a sort of game. In these cases, the astigmatism can be and should be accurately determined by retinoscopy and trial lenses. The full astigmatic correction and within one diopter of the full hyperopic correction should be ordered.

I shall doubtless be taken to task for not having made reference to methods of measuring the degree of squint. I, therefore, anticipate the criticism by expressing my feeling that the tests we have are too cumbersome or too complicated for these children to be of practical service.

It is desirable that the cycloplegic be continued until the child has his glasses, thereby getting a gradual return of accommodation with a minimum of blurred distant vision. The glasses should, of course, be worn constantly and the mother's fears that the child will fall and break the glasses and probably cut the eyes, can be honestly assuaged by the assurance that such accidents are indeed of the rarest. I have no hesitation in putting glasses on children of 18 months and have never seen a child's eye traumatized by breaking his glasses.

At one time for a considerable period I prescribed bifocal glasses, the paster +2.50 diopter stronger than the distant correction, but I have abandoned their use because I was not convinced that the segment for near vision aided materially in the correction of the squint. The paster before the squinting eye usually had to be displaced eccentrically inwards to be of service to the converging eye and this gave a bizarre, antiquated appearance to the child, provoked questions and often were a very valid excuse, it seemed to me, for the child refusing to wear his glasses at all. Moreover, the question arose in my mind whether whatever gain on the squint I might thus make was not

counterbalanced by the weakening of accommodative power which the long-continued use of lenses for near would likely bring about. I therefore discontinued their use.

With the fitting of glasses, however, our treatment by no means ends. Indeed, I feel that orthoptic treatment is of almost, if not of equal, importance.

In this, as in every other sort of training, regularity and routine are of prime importance, and it is my custom to order an occlusive eye-patch to be placed over the fixing eye behind the spectacle frame at meal times. I select this time for two reasons; first, the normal child is usually so interested in his food as to be less concerned with the occlusion of this better eye, and, second, this gives about one and one-half hours daily of training of the vision of the defective eye. Many children object to the patch and I have lately avoided this by ordering a second pair of spectacles for the training in which the deviating eye is furnished with its correction and the lens before the fixing eye is opaquely ground.

A second means of orthoptic training I use, is the regular instillation of the atropin solution in the fixing eye for the first week in every month. This fixes the regularity of the regime and provides for certainly two weeks of each month in which accommodation and, therefore, visual adaptation is possible in the poorer eye alone.

With improvement in the vision of the defective eye will come psychic development and a desire for that eye to partake in the visual act and it is, therefore, highly desirable to stimulate and develop as early and as thoroughly as possible the fusion sense. This must be done early, certainly by the sixth or seventh year, else it is debatable whether fusion thereafter ever be attained. I have discarded the amblyoscope in this work. Patients cannot give the necessary time for its use in the office, nor can the busy ophthalmologist; it requires considerable manipulation of illumination to be properly worked; and its occasional use is a waste of time and energy. I do think that the home use of the stereopscope every day or two with frequent enough changes of pictures to keep up the child's interest is of value and for this purpose I furnish these patients with a set of Kroll pictures which, by judicious use on the part of the parent can be made an amusement for the child as he tries unconsciously to fuse the pictures.

Squint cases should be re-examined at intervals of six months at first, later a year, and it should be impressed upon the parents that these visits to the oculist are for observation and not necessarily for a change of glasses. If manifest refraction on any of these occasions suggests a change of lenses, the child should be given another course of atropin and the static refraction carefully determined and made a check upon the dynamic refraction.

Operative interference in squint by tenomies and advancement I reserve for alternating squint with good vision in each eye, and for cosmetic purposes and should be considered a *"dernier resort,"* especially in the latter.

In conclusion, then, our treatment of convergent squint in children comprises:

1. Atropinization. 2. Correction of errors of refraction under atropin. 3. Constant use of correcting lenses. 4. Orthoptic training by the daily use of occlusion of the fixing eye, elimination of accommodation of the fixing eye by monthly atropinization of that eye, and stereoscopic education of the fusion sense. 5. Operation.

As to the question when I would operate in convergent squint in children, I would answer with Pinafore, "Well, hardly ever."

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R. I. Ophthalmological and Otological Society—2d Thursday—October, December, February, April and Annual at call of President Dr. H E. Blanchard, President; Dr. Jeffrey J. Walsh, Secretary-Treasurer.

The R. I. Medico-Legal Society—Last Thursday—January, April, June and October. James B. Littlefield, Esq., President; Dr. Jacob S. Kelley, Secretary-Treasurer.

EDITORIALS

HYGIENE.

Hygiene may be defined as comprising those factors which make for health. It is preventive medicine applied to the individual rather than to classes or bodies of people. It is based on what used to be called the rules of health, and they are as substantial and useful as they ever were. There is hardly any branch of medical or social science to which this religion of applied physical common sense is not appropriate. Without it, medical and surgical treatment is rarely entirely successful; its rules unobserved, good health brought about by medical and surgical skill will not continue. It may be said that this comes near to what is commonly called "domestic medicine," upon which subject we know of no safe and sane volume, and this is in a way true, yet it rests upon the soundest of biologic principles and upon the very same experimental studies which have established the basic principles of scientific medicine. In therapeutics two tendencies are observed—one to understand and employ a few drugs and remedial measures, the other towards the most outrageous polypharmacy, as evidenced by numberless new prepara-

tions offered by commercial houses and hastily adopted by the unthinking. Many of these owe their efficiency to some well known drug and many of them to the unconscious application of some well known principle of hygiene.

The popularity of specialism, the varied laboratory tests, the frequent invocation of surgery, and the rush of professional activity has caused us to forget some of these fundamental factors and that the first questionings in the taking of case histories and the last instructions at the conclusion of treatment should be along the lines of hygiene.

Hygiene offers a means of interpretation of many of the perplexing phenomena of mental conditions. These are now being thoroughly investigated by the neurologist, whose propaganda for mental hygiene must be ranked as one of the most conspicuously important medical movements of the time.

In the rather weak stand that our profession has taken regarding the indiscriminate use of alcohol we have shown not only a woeful lack of knowledge of the economic aspect of intemperance, alcoholism, criminology and allied subjects and of human nature, but it has overlooked the fundamental principles of health and hygiene.

In the study of gastrointestinal cases the lack of a knowledge of hygiene is very frequently seen. Books on dietetics solemnly recommend as food things that are well known as indigestible and harmful.

While it is true that the perfect digestion will under some conditions digest almost anything, it is equally true that perfect digestion, or for that matter, perfect anything, is very rare, almost theoretical in its nature. Yet we have yet to see a professional book which states that certain articles of food are indigestible and should be avoided by all except those of robust health, leading out-of-door life and performing physical labor. Nor can one find a protest against the absurdly varied diet of the well to do classes or the urging of simplicity of food.

We bespeak the interest of the medical profession in the establishment and maintenance of nutrition clinics in connection with the lower grades of the public schools. Even a superficial review of the work is quite enough to merit our unqualified endorsement and hearty co-operation.

In fact, we should be interested in the entire problem of nutrition, not only of the under-nourished but also of the more normal pupils of all grades. The Parent-Teachers' Association has put us to shame in their support of these vital enterprises.

The application of the sterling principles of hygiene are of particular importance in the life of today, a life which is certainly very different from that of our fathers. Longer hours of labor, for the present popular eight-hour day is not followed by much more than half of the industries, the use of artificial light, the high cost of food, clothing, fuel, and poor housing, have made conditions far different from those of fifty years ago. The concentration of population in large cities plays a large part in the housing situation.

Of particular importance too is the amusement craze, a social condition of unusual and unique features. This is a psychological entity quite unheard of in the past, and to meet this absurd craving, opportunities for innocent and harmful amusement are varied and many. Some of them lead to such late hours that many working people do not get enough rest or sleep. The correction of this error alone is sometimes enough to effect a cure in a given case. The sociologic and moral degenerations resulting from this defect in the life of today would require much time and space for their proper discussion. The results of a diet of pictorial, artistic, musical and literary rubbish are far reaching and it is the duty of the medical profession to lend its aid and assistance to all efforts and movements which have for their object the cleaning up of the "movie," the press and the stage. The gospel of cheer, sunshine and fresh air and clean amusement is as practical a form of hygiene and will have as helpful an influence on the life of a people as any branch of education offered by schools in the general preparation for life.

Hygiene, then, is the very basis of sanitation, preventative medicine, social health and advancement. It is the duty of the medical profession to ever bear in mind its fundamental truths, to apply them to individuals before other methods of treatment are instituted and by constant watchfulness and repetition educate people in the guiding precepts of their own welfare.

ANOTHER VICTORY—INSULIN.

Progress on the extended battlefront in the war which man is waging against those factors which tend to destroy his health and decrease the span of his life is for the most part a matter of short advances here and there along the line. Little by little, by carefully planned and painstaking investigation, one objective after another is reached and the positions consolidated by careful tests and repetitions of the work, until a really appreciable gain has been made. In some sectors the advance is much more rapid than in others but everywhere it is as a rule slow, a matter of a few meters, here and there, a few more elsewhere, until the whole front line has been pushed forward a little way.

From time to time, however, there is executed somewhere along the front, a brilliant *coup*. At a single rush seemingly impassable obstacles are surmounted and the lines of understanding are pushed through the no man's land of conjecture well into the territory of ignorance, often beyond the original objectives. Thus a salient is formed which is continuously widened and greatly enhances the speed of advance throughout the whole sector.

Such a brilliant drive is illustrated by the development and perfection of insulin in the treatment of diabetes, and the profession is hard at work at present consolidating the positions won and extending the lines. The original discovery of the method of extracting the internal secretion of the insular tissue of the pancreas has been referred to as an "accident." It is not the same sort of accident that led Sir Isaac Newton to his brilliant conclusions on the subject of gravitation; the result of a keen mind applied logically to a problem and coming unerringly to an almost obvious conclusion; to which hundreds of others had, peculiarly enough it seems to us now that we know the answer, been totally blind. Who can doubt that the mists of the great hinterland of ignorance which lies just beyond the outposts of scientific advance, is teeming with just such discoveries, which are waiting to reward the efforts of anyone with a good training and independent mind who is willing to sit down and think?

Even more than the brilliance of the discovery of insulin, the ideal methods of its study, production and application, are deserving of praise. Freed from the start of any possibility of being commercialized, the sole object of the work has been to perfect and standardize the product, determine its value, the best methods of using it and the dangers involved in its use; and to make it available for all diabetics that may need it. These objects in the almost incredibly short space of a year and a quarter have been almost completely attained. Already it is announced by the research division of the producing company that the supply is sufficient to "meet any clinical demand that may be created." The detailed clinical reports of the Toronto investigators are soon to be published so that specific information as to the use of the product will be within the reach of any practitioner. Although at present the insulin is being sent to a limited number of investigating clinicians, it is probable that within a few months it will be available for the profession in general. The price is being systematically reduced as rapidly as is consistent with maintaining the standards of production.

When one meditates upon the depressing spectacle of the squabbling diplomats of the European nations, and the tremendous force of national selfishness as exemplified in the recent conference at Lausanne, and one's faith in human nature has reached thereby its lowest ebb—it is refreshing to contemplate such an achievement as the discovery, study, production and distribution of insulin, an undertaking begun and carried out by men of the highest talents and ideals, and a model for all similar procedures in the future.

PHYSICAL LAW.

How much morphine does a man need when in pain? How much food does he need in health? How much alcohol (if any) does he need in sickness? With any or no medical treatment, how long will it be before recovery takes place?

These are a few of the questions that may yet be decided by the unqualified, untrained and scientifically unsophisticated minds that have the presumption to dictate the destiny of health and life.

These may be answered in centuries to come, when by the aid of scientific principles and deductions, the ingestive, digestive, receptiveness, repugnance and the entire physical capacity, some generations before birth, have been exactly determined—and not before.

The liquor privileges have assuredly been abused by some physicians, but the abuse of a law has nothing to do with principle and if in his honest

opinion, alcohol is to be of benefit to his patient, a physician should in no sense be restricted in its use. The recent ruling of a Federal judge is simply a corroboration of our attitude that practicing physicians throughout the country are possessed of a better knowledge of medical requirements than men of the streets or those who hold high office as a matter of political preferment.

Diseases cannot be wished away, active measures are often urgent, and while a physician may be opposed to morphine, he must sometimes use it; the surgeon does not like to amputate a foot or hand, still it may be necessary to save life.

All measures that may conduce to save life, whether alcohol, surgery, morphine or what-not, should be considered irrespective of moral or esthetic aspects and any person or combination of persons who would deny the application of *any* agent that may relieve a pathological condition, evinces an unbalanced mental equilibrium and perversity which, robbed of its assininity, might still foster a belief in witchcraft, the exposition of idols to defeat enemies or repose a confidence in the fetish of magic incantations.

We are willing to be directed but not restrained. We are decidedly on the side of temperance, but not on the side of medical peonage. In our opposition to federal dictatorship that appears to be a ruling against our efforts to preserve health and life, we might well paraphrase the great Cicero's historic lament: "How long, O Catiline, wilt thou abuse our patience*?"

*Spell it either way.

THE NARCOTIC PROBLEM.

We are appalled when told that in America it is estimated that there are at least one million drug addicts. This, at first blush, seems incredible, but the estimate is based upon information derived from authentic sources.

In spite of stringent laws, rigidly enforced, the number of addicts is increasing and the amount of opium and morphia entering the United States is truly astounding. This country leads the world in this shameful traffic. The following presumably authentic statement is illuminating: the average consumption of opium (and its derivatives) per person annually is, in Austria gr. ½, Germany gr. 2, France gr. 3, and U. S. A. gr. 36. Also, it is said that 90% of the opium used is for other than medicinal purposes. If the above statements are even remotely true, and there seems little reason to question their accuracy, then, indeed, the narcotic problem looms up as a gigantic one.

We are just beginning the real study of the problem because only recently have we accorded it a proper scientific consideration. In other words, we are now checking up our former theories and practices on this subject and are beginning research, discussing various phases, and are having appointed committees for investigation. Recently Congress has had before it a resolution which calls for the appointment of a committee made up of physicians, in Congress, to investigate the different phases of this formidable question.

In a report to the assembly of the League of Nations last September it was pointed out that as long as dangerous drugs are produced in quantities exceeding all legitimate requirements, a great danger exists that the surplus will find its way into illegitimate channels. This view was endorsed by the assembly of the League of Nations.

It now is considered as a medico-sociological problem and because of the renewed interest by the different groups of investigators, it is in a better way to be solved than it could possibly have been, as it was viewed in the past.

The feeling that it is a disease—a chronic intoxication—and the unfortunate victim should be treated as a sick person rather than a criminal, is a step in the right direction and promises for the future a broader view of the problem and a more rational solution of this exceedingly important subject.

SOCIETIES

Providence Medical Association.

The regular monthly meeting of the Providence Medical Association was called to order by Dr. William B. Cutts, the President, at 9:00 P. M., March 5, 1923. The records of the last meeting were read and approved.

The Standing Committee having approved the applications for membership of the following men: Francis H. Coone, Ulyer Arthur Persky, Clarence L. Scamman, the Secretary was instructed to cast one ballot for their election.

Dr. Ernest Laplace, of Philadelphia, spoke on

"Pasteur, the World's Greatest Benefactor." Dr. Laplace, who was the only American student of Pasteur, gave an enthusiastic and convincing characterization of his teacher, whom he spoke of as "with one exception the greatest man who ever lived." He described shortly Pasteur's life work, telling of his own help in the experiments on rabies about 1886. A striking incident was his own showing of one of the bouillon flasks used in the classical experiment demonstrating the action of micro-organisms; this flask having been presented to Dr. Laplace by Pasteur. The address undoubtedly made a strong impression on all present.

At the suggestion of the President the meeting stood silently for thirty seconds as a tribute to Dr. Laplace and the memory of Pasteur. On the motion of Dr. Skelton, the Secretary was instructed to write a letter of appreciation to Dr. Laplace.

The meeting adjourned at 10:15 P. M. Attendance, 74 members, 6 guests. Collation was served.

Respectfully submitted,
PETER PINEO CHASE, *Secretary*

The Providence Medical Association regular monthly meeting was called to order by the President, Dr. William B. Cutts, at 9:05 P. M., April 2, 1923. The records of the last meeting were read and approved.

On the motion of Dr. C. O. Cooke, Mr. Pritchard spoke on the proposed Doctors' Exchange, explaining its method of operation, advantages, and answering numerous questions.

The paper of the evening was read by Dr. M. L. Mullaney, on "Pyorrhea; Its Cause and Treatment." He outlined the anatomy and physiology of the teeth and their immediately adjacent structures, and the types of pyorrhea or inflammation affecting the investing membranes of the teeth. After discussing several factors commonly suggested for the etiology of pyorrhea, as bacterial infection, systemic diseases, and faulty diet, he laid great stress on malocclusion of the teeth and outlined the principal errors in the impinging and moving of the opposing teeth upon each other. In his opinion the treatment consists in proper dental work. Dr. Mullaney illustrated his theory by numerous lantern slides.

Dr. Frank E. Peckham opened the discussion, questioning the importance of these theories and stressing that of diet. Dr. Gosline also discussed the paper. Dr. H. J. Connor demonstrated the Schick test in several subjects. Dr. F. M. Adams reported several cases received X-ray treatment of tonsilar trouble and bad results. Dr. A. A. Barrows reported a case of intestinal obstruction in bad condition receiving prompt relief of the dangerous symptoms when a jejunostomy was done.

Dr. A. T. Jones presented two specimens; one a sharp needle which a child had swallowed and passed by rectum without trouble; the other a sharp piece of material, probably bone, which had caused a perforation of the gut.

Meeting adjourned at 10:50 P. M. Attendance, 50 members and guests. Collation was served.

Respectfully submitted,
PETER PINEO CHASE, *Secretary*

The regular monthly meeting of the Providence Medical Association was held at the Medical Library, 106 Francis Street, Monday evening, May 7, 1923, at 8:45 o'clock.

Program: Address—"Chinese Medicine, Ancient and Modern," Dr. E. H. Hume, Dean of the College of Medicine of Yale in China.

The Standing Committee has aproved the application of Dr. Frank I. Matteo.

DR. PETER PINEO CHASE, *Secretary*

WASHINGTON COUNTY MEDICAL SOCIETY.

The quarterly meeting of the Washington County Medical Society was held at the Elm Tree Inn, Westerly, Thursday morning, April 12, 1923.

One new application for membership was received.

The Secretary stated that since the last quarterly meeting three of our members had joined the State Society.

Notice was made of the death of Dr. Harold Metcalf of Wickford, and the following resolutions were adopted:

OBITUARY

"Resolutions on the death of Dr. Harold Metcalf, adopted by the Washington County Medical Society, April 12, 1923.

"Whereas, The Great and Supreme Ruler of the Universe has, in His infinite wisdom, removed

from among us one of our most worthy fellows, Dr. Harold Metcalf, and

"Whereas, The long and intimate relations with him in the faithful discharge of his duties to this Society, makes it eminently befitting that we record our appreciation of him; therefore, be it

"Resolved, That the wisdom and ability which he exercised in the aid of our Society, by service, contributions, and wise counsel, will be held in grateful remembrance;

"Resolved, That the removal of Dr. Metcalf from our midst leaves a vacancy and shadow that will be deeply realized by all the members of our Society, and will prove a serious loss to the State Society as well;

"Resolved, That with deep sympathy with the bereaved relatives of the deceased, as well as the large constituency that he so long and faithfully served during his life as an honest, upright and faithful physician, we express our hope that even so great a loss to us all may be overruled for good by Him who doeth all things well;

"Resolved, That a copy of these resolutions be spread upon the records of this Society, a copy printed in the Rhode Island Medical Journal, and a copy forwarded to the bereaved family.

"A. B. Briggs, M.D.,
"S. C. Webster, M.D.,
"W. A. Hillard, M.D.,
"Committee."

Dr. Frank E. Peckham of Providence, President of the Rhode Island Medical Society, paid us an official visit and spoke on the subject of "Lower Back Conditions" and demonstrated a few of the many exercises he uses—and for this he received a rising vote of thanks.

Adjourned and dined.

W. A. Hillard, M.D., *Secretary.*

Woonsocket District Medical Society.

A meeting of the District Medical Society was held Thursday, April 26, at St. James Hotel. Discussion, "Hospital Standardization."

T. S. Flynn, *Secretary*

Rhode Island Medico-Legal Society.

The regular April meeting of the Society was held at the Medical Library, 106 Francis Street, Providence, on Thursday, April 26, 1923, at 5:00 P. M. Light supper at 6:30.

Dr. Charles Carroll, Deputy Director of the Rhode Island State Board of Vocational Education, lead a discussion on "Rehabilitation—The Joint and Several Interests of Lawyer, Doctor, and Educator."

Jacob S. Kelley, M.D., *Secretary*

HOSPITALS

Providence City Hospital.

Dr. Ralph DiLeone finished his service as interne on April 1st.

On April 12th Dr. Jack V. Treynor began a three months service. The regular monthly meeting of the Staff Association was held at the City Hospital on April 18th, at which meeting Dr. Alfred Potter read a paper on "Insuflation of CO2 Gas as an Aid in Diagnosis in Gynecological Conditions."

The Board of Hospital Commissioners have elected the following men to the Staff since January 1st.

Dr. Raymond G. Bugbee, transferred from the Department of Urology to fill the position of Visiting Anaesthetist, In-Patient and Out-Patient. Dr. Guy William Wells was elected Visiting Physician to the Out-Patient Department, Department of Medicine, to fill the vacancy made by the resignation of Dr. Frank Berry.

Rhode Island Hospital.

Dr. Pickles

The regular monthly meeting of the Internes' Association was held on April 19, 1923. Mr. Raymand Walsh gave a very interesting and highly instructive talk on "The Physician in Court," describing in detail the duties and privileges of the medical man as a common and expert witness.

On May 1, 1923, Drs. Earl A. Bowen and Henry McCusker completed their service as internes at this hospital. Dr. Bowen, after a short vacation, will become house officer at the Providence Lying-In Hospital, while Dr. McCusker has started practice in this city.

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ORIGINAL ARTICLES

SOME PROBLEMS IN ARTIFICIAL FEEDING.*

By Dr. Henry E. Utter
Providence, R. I.

In taking up the subject of artificial infant feeding we enter upon a branch of practice which has quite properly been termed an art rather than a science. Hardly any part of dietetics depends so much upon individual digestive capacity. The relative importance of fat, carbohydrate and protein, the vagaries of the calorie, the vitamines and mineral salts, unite to form a study which is often baffling and not controlled by many definite rules.

Though varied may be the symptoms encountered in infant feeding, we are yet justified in making certain general classifications of disturbances in infant feeding. Fortunately many normal babies do well on almost any type of feeding, but the cases with chronic digestive disturbances, malnutrition and infantile atrophy are the ones which give us the perplexing problems.

The most common symptoms encountered in infant feeding, both objective and subjective, may be classified under:

I. Gastric disturbances, including persistent regurgitation or vomiting, dependent upon failure to assimilate properly some element in the food, or pylorospasm.

II. Intestinal disturbances, which comprise the greater number of our cases, presenting undigested stools, acute and chronic diarrhœa, colic and defective metabolism of various food elements.

III. Disturbances of mineral salt metabolism and vitamine deficiency as illustrated in ricketts, tetany and scurvy.

Such a classification entails an immense amount of material for discussion and each subject demands individual attention.

To include the greater number of disturbances we may take up in a general way symptoms due to various food elements when fed in amounts exceeding the digestive capacity of the infant.

*Read before the quarterly meeting of the Rhode Island Medical Society, at Providence, March 1, 1923.

I. *Fat.* Intolerance to fat manifests itself in the stomach by regurgitation, appearing shortly after feeding or by continual regurgitation between feedings of small fat particles mixed with saliva and mucus. Such symptoms may disappear on lowering the percentage of fat in the food and some cases increasing the interval between feedings will suffice. Too much fat inhibits the pyloric reflex with resultant retention of food in the stomach over too long a period.

Relative to the intestine there may be colic, rectal tenesmus, manifested by straining on the part of the infant and the passage of soft white curds, with or without bile tinged mucus, in the stools. Here again the fat content must be lowered to correct the condition.

Fat digestion in the intestinal canal may be improved by adding lime water to the feeding, the curds often disappearing and a smooth soapy stool resulting from the union of the calcium salts and fat. A high percentage of lime water in the feeding increases the absorption of fat, particularly in those infants who handle carbohydrates poorly, in which case the food value may depend on the fat. Occasionally such a combination may produce hard, dry, crumbly stools.

II. *Carbohydrates.* Carbodydrates intolerance manifests itself in various ways, depending in general upon the type of starch or sugar used. Cane sugar and malt sugar are probably more easily assimilated than milk sugar. The two former, cane and malt, may produce some eructation and vomiting, this being particularly true of the various malt preparations. To the vomiting infant milk sugar is the one of first choice. By the use of sugars we find a ready means of producing gain in weight, due to their easy assimilation.

In the intestine all sugars may produce some acid stools with resultant reddening and excoriation of the buttocks. Such a condition is more marked when milk sugar and malt sugars are used, particularly milk sugar. Cane sugar is probably the most desirable where there is an increase in the number of stools. Starch or sugar indigestion may further manifest itself by flatulence and abdominal distention, accompanied by irritability on the part of the infant.

The effect of the more insoluble starches, such as wheat, flour or barley, is somewhat similar to that produced by the sugars. They are readily acted upon by pancreatic secretion and have a marked influence upon the assimilation of protein matter. The starches may produce constipation when fed in large quantities.

The choice of the sugar to be employed in a formula is not always an easy matter and the success of the formula may depend almost entirely upon the carbohydrate which we decide to use, in view of the present tendency to feed high sugar percentages.

At the present time cane sugar and malt sugar preparations are more commonly used than milk sugar because of their ready assimilation. Clinically, a higher percentage of malt or cane sugar may be tolerated by the average baby.

III. *Proteins.* Formerly the casein of cow's milk was considered an active factor in the production of various symptoms during the course of artificial feeding. This viewpoint has gradually been changed until at present the fats and sugars are accounted as the most common offenders. To be sure, a hard protein curd in passing through the intestinal canal may produce considerable distress and incidentally mucus in the stool, yet the curd is so easily broken up by boiling the milk, the addition of lime water or a starch, that it may be considered as almost negligible in our calculations.

How then, may we decide what to feed the individual baby when it first comes under our care?

Often upon the first formula depends the success or failure of our experiment. Several factors enter into the formation of such a decision.

First and perhaps most important is a good history of previous formulæ from the time artificial feeding was instituted. Usually a variety of foods have been tried, and from the effects of these upon the infant's digestion we may glean valuable information concerning the future procedure.

The character of stools, particularly as regards color, consistency, the presence or absence of curds, the amount of regurgitation or vomiting produced by the various formulæ, the effect upon the appetite and, what is of vital importance to the parents, the effect upon the baby's disposition, are important points.

In a general way, in criticizing the past record of nearly all of the hard feeding cases, we find that more often than not, the baby has been underfed, particularly in regard to the quantity given at each feeding. Conservatism in regard to quantity per feeding is an advisable things, but a very unhappy baby is often the result. The average baby in the first month will take from 2 to 3½ oz. and from then until he reaches 10 or 11 pounds, 4 to 5 oz. Between 11 and 15 pounds he will take 6 to 7 oz. These quantities may be given on a three-hour schedule or an ounce more per feeding on a four-hour schedule. It is perhaps easier to feed a baby according to his weight than by consideration of his age, especially in the first 6 or 8 months of life.

We further find by the history that too often the stools have not been watched carefully, and that the changes of formulæ have been made too frequently. This is a common fault, frequent changes often being made because of the concern of the family. Three or four days or, better, a week, may be necessary for the infant to adjust himself to a food.

We must further determine from an analysis of the history how many symptoms depend upon too much handling of the baby, irregularity in hours of feeding and sleep and insufficient fresh air. Too much handling of an infant is many times the cause of irritability, rather than any fault in the formula. A milk mixture may be properly adjusted to a baby's digestion and the irritability will still remain if the nervous system is exhausted by irregularity in habits and too much handling.

Another important factor in deciding what to feed the baby rests upon the psychology of the family. The physician's prime motive in prescribing a formula must be first to correct the indigestion if present, and secondly to promote growth and development of the infant. What of the parents? What part of the problem worries them most? Is it the failure to gain, the crying of the baby from colic, the character of the stools, the vomiting or some other symptom? The physician must not follow entirely the mandates of the family but if he can first overcome the symptom which produces the most concern, he will more readily acquire the confidence of the parents. Oftentimes this is impossible from the physician's viewpoint. For instance, the family may be worried over the loss in weight of the baby with diarrhœa, but further indigestion and loss in weight only result if the feeding is increased. Here the diarrhœa must

be corrected first, regardless of the family complaint.

Knowing, then, the effects of the various food elements upon the digestion, we are prepared to prescribe more rationally for the individual baby. It is not within the scope of this paper to take up individual feeding problems or to discuss the various acute intestinal upsets and their treatment.

We have at our disposal top milk, whole milk, skimmed milk, as well as many sugar and starch preparations. There are on the market evaporated and condensed milk, as well as various dried milk preparations, all of which have their place in feeding.

In general practice whole milk provides possibly the best basis for the average formula, due to the nearly equal percentages of fat, carbohydrate and protein. It must, however, be remembered that most infants cannot tolerate a large percentage of all these elements. It is necessary then to start with small quantities of milk and raise the caloric value of the formula to the required point by the addition of sugars or starches, the latter as stated above being the most readily assimilated of the food elements.

There is an increasing tendency to cook milk formulæ to aid the digestion and also to overcome the possibility of bovine tuberculosis. If the formula is cooked there is considered by some the possibility of the advent of rickets and scurvy, but in most cases these may be prevented by the administration of cod liver oil and orange juice.

To summarize briefly,—In the presence of vomiting and regurgitation or stools containing fat curds, high fat percentage and a high percentage of cane or malt sugar are contraindications. Skimmed milk preparations with the addition of milk sugar or some starch, form a more rational basis for the construction of the formula. To the child with vomiting from pylorospasm, solid mixtures of milk thickened with a cereal, which must be spoon fed, will usually give excellent results.

To the infant presenting flatulence and colic, low starch and sugar feeding is imperative, milk sugar, however, being perhaps the more satisfactory under such conditions.

If the stools are frequent, sour or acid in type, fat and protein are well tolerated, the sugars less so, but cane sugar is usually the one of choice.

If the problem is one of a failure to gain in weight, and this group comprises by far the greater number of cases coming under observation, we have recourse to high carbohydrate feeding with low or moderate percentages of fat and protein. As formerly stated, the malt sugar preparations and cane sugar are our most valuable friends, these particularly when united with wheat or other starches.

It can be readily seen that it is almost impossible to classify the cases of gastric and intestinal disturbance, malnutrition and infantile atrophy under any definite set of rules and prescribe accordingly. Each individual case must be studied and the digestive tolerance investigated. When this is done, and it is not always an easy matter, smooth sailing is ahead and the miserable, marasmic baby may become a vigorous child and a good future citizen.

THE PRINCIPLES UNDERLYING WEANING FROM THE BREAST.

By Harold G. Calder, M.D.
Providence, R. I.

Most text books and articles on infant feeding devote considerable space to the methods of improving the breast milk, the indications for weaning, and to the details of artificial feeding; but the correct manner of weaning is left to be learned by experience. A study of our case histories shows us that most of the chronic digestive disturbances start when artificial food is begun. The weaning period is, therefore, a very important one in the infant's life. A successful weaning with continued gain in weight, with no symptoms of indigestion, means a healthy baby from then on, if infectious disease is eliminated. A poor weaning, on the other hand, means indigestion, loss of weight and a long sickness, with a possibility of death unless there is skillful management of the feedings.

It is evident of course that every baby must be weaned. For purposes of classification, we may divide them into 3 classes.

First—The normal weaning. at 6 to 12 months.

Second—The normal weaning in the first 6 months.

Third—The weaning forced by maternal indications, as the illness or death of the mother or her

*Read at the quarterly meeting of the Rhode Island Medical Society at Providence March 1, 1923.

need of going to work, or to return to activities which do not allow time for nursing.

There are two main underlying fundamental principles which should guide us in our care of all three classes. These principles are much more important that any special kind of method or food or any system of infant feeding. They are more important than percentages or calories, because without them there is a good chance of failure and with them it is possible to feed a baby successfully in a great many different ways. It is possible that there are as many methods as to details as there are men studying pediatrics, and that as a general rule all are equally good. The details can only be learned by experience, and each man uses the ones he has learned. The underlying principles are much more universal in their application and more easily understood.

The first principle is protection from infection. At the beginning of artificial food, the gastro-intestinal tract is very susceptible to bacteria introduced by the food. All feedings should be sterilized. There should be no exception to this rule. After the feedings have become well established and the weaning successfully completed some babies will do better on unboiled milk, but no chances should be taken during the weaning.

The second principle is education. No baby should be presupposed to be able to digest much of anything except human milk. Some babies can digest more than others, but we have no way of finding them out. The only safe procedure is to consider that they all have poor tolerance for artificial food. Fortunately, however, we can teach the digestive organs to accommodate themselves to most anything in reason, provided we begin with small enough quantities and make our increases gradual enough. Much more stress should be laid on this idea because it is really the keynote of artificial infant feeding.

The third principle is watchfulness. By that, I mean the early recognition of failure to go slowly enough; the early correction of indigestion, if it appears, in spite of our care.

To return now to our three classes of infants, let us apply these principles. The first needs no further discussion, and the third is embraced in the subject upon which Dr. Utter will speak. We have then to consider only the question of education.

Under perfectly normal natural conditions, a baby should continue getting the mother's milk exclusively until six or eight months old. During that time there has been a big gain in weight and strength and the baby needs more food. The four-hour feeding interval is usually most satisfactory. The artificial food is given before the breast at the three day feedings; the first and fifth remaining breast alone. It is given first because the baby takes it easiest that way. The bottle is not advised as a rule, because it does not seem natural to the baby of this age; but it may be used of course if the baby will take it. The amounts at a feeding may be one to four ounces, subject to the baby's temperament and taste. It is not advisable to force the food except in a few very obstinate cases. Almost invariably, the baby will act well if the mother or nurse does not try too hard or get nervous. The mother must be told that babies will fight against anything forced upon them—but can be easily made to do as desired if handled with good nature and patience. Starch and milk should be the first food, using one-third milk and two-thirds gruel. From this as a beginning the amounts are increased, the gruels made thicker; the milk increased until the three feedings are all artificial. The time that this should take depends upon the breast and baby's gain. The breast milk may well be continued until one year of age. Finally the first feeding is made artificial and the fifth dropped and the baby is weaned. I am purposely leaving out the details in order to emphasize the principles. If left to her instincts and ancestral teaching, the mother will feed the baby in much this way, but will do so very irregularly, putting something in the stomach eight or ten times a day.

The second group of babies have been classified as normal weaning in the first six months. There are a large number of mothers who are not able to nurse their infants successfully according to the way nature intended. This is probably the result of our civilization and heredity and is not due to any lack of desire on the mother's part. By stimulation of breasts, by attention to mother's hygiene, we may increase the supply—but never to the normal point. When, therefore, a baby gives evidence of failing milk supply—by slow gaining, and pulling on the nipples, and starvation stools; that baby must be considered a candidate for weaning before the natural time. It is extremely im-

portant that the weighing is carefully and regularly done, so that this fact may be determined at the earliest possible time. As soon as it is known, artificial feeding should be started after each breast feeding. The amount at first is small—one ounce perhaps, depending on the amount of breast milk. This may be checked by weighing before and after the breast. The food is made up of milk diluted at least one-third and fortified by carbohydrate. With this as a basis, the food is gradually increased. The breast milk is not stopped as long as the baby will take it. It is given each time until the breast is emptied, usually five to ten minutes. In this way the maternal supply is kept up the longest possible time, and the baby's gastrointestinal system is gradually accustomed to the artificial food, so that when the breast secretion stops there is no sudden transition. The increases must be small and it must always be kept in mind that we are preparing the baby for the future as well as providing for the present.

It is perfectly easy in a large majority of these babies to start with a small amount and increase gradually as the breast milk fails until almost all the food is artificial and the breast practically stops secreting. This can be accomplished without indigestion and with steady gain in weight. A few of the babies have not as much vigor and digestive power as the rest, and special care is necessary to straighten out digestive troubles. The fact that the first amounts are so small and our increases so gradual, makes a serious upset very unlikely, and if the beginning of the indigestion and the part of the food causing it are known, it is usually corrected quickly.

We now come to the third class of babies; those who are weaned for maternal reasons, before the time or more quickly than would be otherwise necessary. Several subgroupings are apparent.

In the first place, some mothers do not wish to confine themselves continuously for the purpose of nursing the baby. It is probably harmless to give one artificial feeding a day. This should be started at a small amount before the breast and quickly but gradually increased, if well tolerated, until a suitable amount is given. The milk dilution also should be greater at first than will be required after tolerance is established.

Other mothers are prevented by disease or financial position from nursing their babies. The same method is followed in the beginning, but as soon as one feeding is all artificial, another is made, and still another, until they are all bottle feedings. The speed with which this is done depends of course on the reasons for doing it. But as much time must be taken as can be. By weaning the baby too quickly we are apt to start a difficult feeding case.

In a few instances, the mother has no milk or dies, and the baby must be started on an alien food without any educational preparation. This is a situation which calls for increased vigilance and care. We are almost certain to get some indigestion.

Regardless of the age of the baby, begin with milk diluted at least one-fourth and watch the stools, increasing gradually but as quickly as possible to the amount of milk necessary to cause gain in weight. The carbohydrate added should also be low at first and increased as it is shown to be well borne.

The knowledge of the seriousness of this sudden weaning should make all physicians very careful about recommending it when not necessary. Indigestion from mother's milk is not an indication. If it cannot be controlled any other way, the time of the nursing may be gradually lessened until the symptoms stop, and a little artificial food given after them, as in the normal weaning of the first six months. Insufficient mother's milk is not an indication. Temporary mixed feeding while tolerance is being educated is perfectly satisfactory. Desire on the part of the mother to do it is not an indication. There is no indication except certain diseases, death and absence of breast milk. And it should be made sure that the breast milk is really entirely absent and cannot be stimulated in any way, because babies do better if they get even a little human milk in their early weeks.

In conclusion, I wish to emphasize that the principles underlying successful weaning from the breast, are protection from infection, education and watchfulness. Guidance by these is more important than the following of any system of infant feeding or any particular kind of modification of milk. It is possible to get good results with any reasonable method, with different sorts of milk, as evaporated and dried milk or lactic acid milk; with all sorts of carbohydrates, provided the physician is familiar from experience with what he is using. Each one of us can naturally get the best results from our own methods. There should be no excuse, however, for not following the underlying principles which make for success. The number of babies weaned improperly, often with no other directions than to try somebody's "food" and follow the directions on the box, should decrease.

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EDITORIALS

AUTOPSIES.

The practice of medicine is not an exact science and there is little likelihood that it ever will be. The medical historian has revealed to us some of the knowledge and ignorance about the human body and disease existing at different historic periods and in different countries. Yet when one compares the ignorance of the past with the exact knowledge of today, it is evident that physicians have passed out of the penumbra of mysticism into the daylight shed by scientific knowledge of today. It has been a long, slow progress, slower at some periods than at others, but accelerated tremendously during the last century and particularly the last fifty years.

The goal is by no means reached. Twenty-five years hence we will look back and wonder at our ignorance of many facts about disease that will have been commonly known by that time. It is only by continued investigation and by the teaching of every medical student all that he should know about diagnosis, prevention and treatment of disease.

In the treatment of the individual patient the best results are to be expected when his physician

has his senses highly trained, particularly the senses of sight, hearing and touch, and who by the patient's history and his own observation, clinical and laboratory, can construct a disease process which is the cause of the man's illness. The surgeon has a wonderful opportunity to correlate the surgical findings with the patient's symptoms and the signs presented. In the treatment of non-operative conditions, however, the opportunities of checking up one's diagnosis are not so numerous because most patients get well. But if the patient dies it should be the aim of every physician, whether he is in private or hospital practice to find out whether he was right or wrong. Every autopsy that a physician sees makes that man a perceptibly better physician. Yet how many autopsies or even surgical operations have you seen during the last five years? The private practitioner complains that he has not the time to get to autopsies. A woeful mistake. Were Osler and other great teachers too busy to spend time at the autopsy table? We are not too busy. It is nothing more than inertia. As time goes on, such a man becomes more certain of his diagnosis and treatment because he sees less and less of truth, and the public has to suffer.

This inertia is seen even in the hospitals of this country. There are many hospitals which never have any autopsies or else they are few and far between. What kind of hospitals are these in which to teach internes and visiting staff? Even hospitals which post 25% of those dying within their walls are not common in this country. German hospitals before the war posted a very large percentages of their dead patients. There are two or three hospitals in this country and Canada which also have autopsy record of 80% to 90%.

No man need to be ashamed of learning about his mistakes or allowing his colleagues to know about them as revealed at the autopsy table. It is at the autopsy table that a man's ability to diagnosticate disease is also demonstrated and a small percentage of mistakes points him out as a distinguished physician. People do not expect the doctor to be always right. They know that to be impossible, but they do expect that he shall have honestly tried himself to determine the cause of disease and be willing to summon advice if necessary. And if at autopsy his diagnosis has been wrong relatives will know that the physician did all he could and perhaps all that anyone could for the patient, whereas if his diagnosis was correct they realize his ability.

The physician should not rest until he has tried every possible means to get autopsies on every possible case. He owes it to himself and he owes it to the public. There will come a time in the near future when a physician's diagnosis on the death return will not be accepted by the authorities unless he has in the case of many diseases, laboratory or autopsy findings, to substantiate it.

SOCIAL SERVICE.

Apropos of some very excellent speeches at the June meeting of the State Society, it does not seem amiss to remind the physicians of Rhode Island of the Social Service work being done at large throughout the State.

A delegation from Rhode Island of nearly thirty-five workers attended the National Conference recently held in Washington, D. C., and an attendance of one hundred at Providence meetings is not unusual. The activities of these workers is such as to be of interest to all students of human nature and especially to physicians. Attached as they are to hospitals, charitable institutions, nursing associations, the courts, the schools, reform institutions and settlement houses, they are actively dealing with a class of people who are socially ill at ease if not diseased; a class of people probably as well understood by the members of the medical profession as by anyone.

If the members of the profession are to be exhorted to show more interest in affairs, civic, politic and social, the field of Social Service is one that has grown remarkably in recent years, is doing a service that is akin to that of the physician, a service that is full of intense human interest and achieving a measure of success not to be counted in dollars and cents.

Nearly every community has its District Nursing Association, its local branch of the Red Cross and, in the larger centres, the Juvenile Courts, all easily available to the physician.

A phase of State Social Service new to Rhode Island and soon to begin is the Mothers' Aid Bureau. Probably no one person in a given community will be in a better position to know the real status of the household than the family physician and in the formation of the local boards who will

co-operate with the State Director the members of the medical profession could aid materially either as members of the board or as advisers.

Not every physician would be interested in Social Service as an extra-professional activity but to many it will have the strongest appeal once the interest is aroused.

THE PREVENTION OF HEART DISEASE.

In a recent lecture on the prevention of heart disease, delivered by Dr. F. J. Poynton of London, and published in the British Medical Journal for June 2, there are many things which should not only interest us but also rouse our solicitude. Dr. Poynton remarks quite truly that for the moment curative treatment is almost at a standstill. Cardiac tonics have been studied with the greatest industry; we are not likely to learn more of the value of salicylates in heart disease than we know now, and serums and vaccines are not yet effective. But the prevention of heart disease is a field in which much useful work may be accomplished.

When we realize that, excluding congenital affections, the major part of heart disease is infectious in origin, there is no need to stress the gravity of the situation, for everyone with experience knows it, to his chagrin. Of 172 cases of rheumatic heart disease admitted to the Hospital for Sick Children under Dr. Poynton's care, the age limits were 2 and 12 years, and of these children 66 per cent had signs of organic heart disease, 22 died and 38 became complete invalids—a tragic record. In every hospital in London and in America where children are admitted, the record is the same. Viewed from the pathological side, there are some points about infectious heart disease which are simple but yet outstanding. If the poisons attack the noble tissues—the muscles and nerves of the heart—these cannot be replaced if destroyed, and if they are partially damaged can recover completely only if that damage be slight. There are, then, two problems before us at the bedside; one, What evidence is there of active infction? The other, To what extent are the symptoms the result of scars due to healed lesions? With these two problems in mind, we rapidly come to the conclusion that in the young some degree of active infection is almost constant. It is an axiom that the chief cause for a cardiac breakdown in a child is active—not necessarily fresh—infection. The rheumatic process usually produces a twofold damage—there is myocardial weakness and scarring of the valves. And we shall never get a real grasp of the problem of prevention unless we keep these two classes of injury before our minds, for it is injury to the muscle of the heart which particularly calls for prolonged supervision in convalescence, and the scarred valves disturb the work of the heart as a mechanical pump.

Unfortunately, the prevention of rheumatic heart disease can be attained only in a modified degree, for too frequently the patient has already been damaged, and the most we can do is to stave off further attacks. Now it is certainly true that except in the largest general hospital there is no great opportunity for the physician and student to see many cases of acute rheumatic carditis, and yet there is no doubt that at this age rheumatic heart disease requires unusually careful observation. In the child the detection of dilatation, of early endocarditis and pericarditis—that is, the dawn of heart disease—requires exceedingly close attention. We all recognize that early heart disease is often most insidious, occurring without pain or any striking symptom. So remarkable is this that we recognize a group of cases of primary cardiac rheumatism which may first come under our observation with very definite organic disease and yet with no data to guide us to its exact commencement or duration. If we physicians recognize this difficulty, how much more doubtful must be the parents who see their children lying in bed without pain or distress and are told that convalescence must be slow and carefully supervised. And yet the entire future of the child depends upon the heart muscle becoming once more firm and strong. In no other way can we assure to such children a reasonable return to health and activity. Just here lies a pressing need for the education of parents and of others having charge of children.

The dangers arising from the prevalence of chorea are always threatening, but insufficiently recognized. Chorea is rheumatism of the brain; and it seems very probable that its frequency is due to overstrain and lowering of the resistance of the nervous system to infection. If, in private practice, we discover a child flagging in health, becoming irritable and unequal to school life, still more if we observe definite warnings of chorea,

we advise a vacation from school together with mental and physical rest. But large numbers of children who have no private medical supervision are kept at school until chorea has become definitely established, and among them we find a large percentage of organic heart disease. Here is an opportunity for propaganda among school teachers who can be instructed to recognize the premonitory symptoms of chorea, and by so doing they can be instrumental in warding off some of the mischief arising in the course of the established disease. The school medical officers carry out valuable work for the cardiac children, and many cases are recognized by them and placed under proper treatment. This is all to the good, but there is still room for a wider diffusion of knowledge among the public at large concerning the serious dangers in wait for the hearts of choreic children.

As for the provision of suitable employment for cardiac patients, much has been done in America, but much remains to do. There are, of course, all grades of disability up to complete invalidism, and our endeavor should be to ascertain, in each instance, what these limitations are. Much labor will, however, be wasted if no organized attempt is made to study the various adult occupations in relation to physical exertion, and to make a practical schedule which will be within the reach of parents who are placing their children with damaged hearts in the world. We want to prevent, as far as possible, a boy with a damaged heart becoming a coal-heaver or a furniture mover, and to give the child every chance of being placed in an occupation which will be suitable to his or her cardiac powers. The suffering and economic loss arising from the placing of cardiac patients in wrong occupations must be even greater than we know it to be. Parents do, no doubt, sometimes recognize these dangers, and one admits that "needs must when the devil drives," but there still remain many who would be greatly assisted if the importance of occupation was included in instructions to parents, and better opportunities given to these damaged but active workers to select suitable occupations. Such, in brief, are some of the points stressed by Dr. Poynton in his admirable lecture, the perusal of which we commend to our readers.

SOCIETIES

Rhode Island Medical Society.

May 22nd, 1923

The Council met at the Medical Library at 4:30 P. M., Dr. Peckham in the chair.

The Treasurer's report was presented by Dr. Jesse E. Mowry, as follows:

Annual Report, 1922

Collations	$501 90
Expenses of Secretary	90 00
Printing and Postage	68 08
Fuel	576 92
Electricity	45 48
Telephone	66 71
House Supplies	167 24
House Repairs	645 95
Insurance	242 68
City Water	18 51
Safe Deposit	6 00
Librarian	1,384 65
Books	85 59
Journals (Ely Fund)	35 34
Janitor	450 97
Rhode Island Medical Journal	376 00
Lantern	91 00
	$4,853 02
Cash on hand to Balance	1,441 24
	$6,294 26

Cash on Hand Jan. 1, 1922	$1,634 12
Annual Dues	3,395 00
Donations	900 45
Ely Fund	74 00
Harris Fund, Interest on Liberty Bonds	212 50
From Providence Medical Association for one-half ownership of Lantern	45 50
Interest on Daily Balance	32 69
	$6,294 26

May 21, 1923. Examined and found correct.

BERTRAM H. BUXTON
FRANK M. ADAMS
Auditors

1923		
Jan. 1	Chase Wiggins Fund	
	To Loan R. I. Medical Society	$6,892 21
		$6,892 21

1923		
Jan. 1	H. G. Miller Fund	
	To Loan R. I. Medical Society	$5,359 10
	Rent H. G. Miller Room	250 00
		$5,609 10

1923			
Jan. 1	J. W. C. Ely Fund		
	1 Bond So. California Edison Co. .	$980 00	
	8 Shares Mechanics National Bank Stock	480 00	
	Paid Rhode Island Medical Society (for Journals)	74 00	
			$1,534 00
1923			
Jan. 1	Endowment Fund		
	Cash on Hand	$2,306 65	
	Liberty Bonds 3½%	350 00	
			$2,656 65
1923			
Jan. 1	Printing Fund		
	To Loan R. I. Medical Society . .	$1,677 52	
			$1,677 52
1923			
Jan. 1	E. M. Harris Fund		
	5 Liberty Bonds	$5,000 00	
	Paid Rhode Island Medical Society for Repairs on Buildings . . .	212 50	
			$5,212 50

It was voted to accept the Treasurer's report and to so recommend to the House of Delegates.

Dr. Mowry called attention to the fact that several securities held by the Society are returning a lower financial income than is desirable and, on motion of Dr. Rogers, seconded by Dr. Barry, it was voted that the Treasurer and President be empowered to sell and reinvest in long term bonds the following funds of the Society: $300.00 1st Liberty Loan; $50.00 2nd Liberty Loan converted Endowment Fund on deposit in Peoples Savings Bank; $5,000.00 4¼% Liberty Loan, comprising Harris Fund.

1922			
Jan. 1	Chase Wiggins Fund		
	By Indebtedness to R. I. Medical Soc.	$6,892 21	
			$6,892 21
1922			
Jan. 1	H. G. Miller Fund		
	By Indebtedness to R. I. Medical Soc.	$5,359 10	
	Interest	250 00	
			$5,609 10
1922			
Jan. 1	J. W. C. Ely Fund		
	1 Bond So. California Edison Co. .	$980 00	
	Interest on same	50 00	
	8 Shares Mechanics National Bank Stock	480 00	
	Interest on same	24 00	
			$1,534 00

1922			
Jan. 1	Endowment Fund		
	Cash on Hand	$2,283 38	
	Interest for 1921 (withdrawn for purchase of books by vote of House of Delegates)	85 45	
			$2,197 93
	Donations	17 94	
	Liberty Bonds 3½%	350 00	
	Interest	90 78	
			$2,656 65
1922			
Jan. 1	Printing Fund		
	By Indebtedness to R. I. Medical Soc.	$1,677 52	
			$1,677 52
1922			
Jan. 1	E. M. Harris Fund		
	5 Liberty Bonds	$5,000 00	
	Interest on same	212 50	
			$5,212 50

May 21, 1923. Examined and found correct.

BERTRAM H. BUXTON
FRANK M. ADAMS
Auditors

It was voted that the annual dues of Drs. Byron Lillibridge and Charles H. Leonard be remitted.

It was moved and seconded that the Chairman of the House Committee, Board of Trustees of the Medical Library Building, be empowered to make necessary repairs to the outside masonry of the Library. It was so voted.

Dr. Welch moved that the dues for the coming year be fixed at $10.00. Seconded and so voted.

A request from the R. I. Society for Mental Hygiene, that this Society contribute to the expenses of the meeting recently held in Providence under the auspices of the former Society, was read by the Secretary. It was moved by Dr. Barry, seconded by Dr. Mowry, that the subject be laid on the table. So voted.

Dr. Barry moved that the Secretary write a letter to the Corporation of the Woonsocket Hospital, expressing the Society's approbation upon the Hospital attaining standardization, and upon the inception of its drive for $250,000.00 fund, after being duly seconded the motion was adopted.

Adjourned.

J. W. LEECH, *Secretary*

House of Delegates.

May 22nd, 1923

The House of Delegates met at 5:15 P. M. at the Medical Library, Dr. F. E. Peckham in the chair.

The reading of the minutes of the previous meeting, having been read to the Society in the general session and published in the transactions of the Society, was dispensed with by unanimous consent.

The House then proceeded to the election of officers for the year 1923-1924, with the following results:

President—Dr. A. T. Jones.

1st Vice-President—Dr. W. F. Barry.

2nd Vice-President—Halsey DeWolf.

Treasurer—Jesse E. Mowry.

Secretary—J. W. Leech.

Committee on Arrangements—Alex M. Burgess, C. F. Gormley, Eric Stone, Treasurer.

Committee on Legislation, State and National—F. T. Fulton, H. E. Harris, Milton H. Duckworth, President and Secretary ex-officio.

Committee on Library—H. G. Partridge, J. E. Donley, C. S. Westcott.

Committee on Publication—F. N. Brown, F. M. Adams, J. A. King, President and Secretary ex-officio.

Committee on Education—George H. Crooker, Wm. H. Buffum, Jr., S. H. Long, President and Secretary ex-officio.

Curator—C. D. Sawyer.

Committee on Necrology—J. F. Kenney, Harold DeWolf, Anthony Corvese.

Auditor for 2 years—J. B. Ferguson.

Delegate to A. M. A. for 2 years — Roland Hammond, George J. Howe.

The Secretary reported to the House the action of the Council.

The Treasurer's report, as presented to the Council, was ordered accepted and placed on file.

The Secretary's annual report was then read, as follows:

Annual Report of the Secretary, 1922-1923.

I submit herewith the Secretary's annual report for the year 1922-1923.

Three regular quarterly meetings have been held. At the September meeting the Society was the guest of the Woonsocket Medical Society at the Woonsocket Hospital, and an inspiring and interesting program of clinics and papers was arranged by the local society. Meetings in various parts of the State are of great advantage in increasing friendly feeling and respect among the Fellows, and in making for solidarity in the Society.

The membership roll of the Society at present comprises:

Active members	373
Non-resident members	28
Honorary members	9

The Society has suffered in its membership by the death of the following members: L. F. C. Garvin, October 2, 1922; Harold Metcalf, March 3, 1923; John H. Miller, August 2, 1922; John A. Remington, February 3, 1923; George E. Simpson, July 9, 1922; Edward T. Stimson, July 5, 1922; Horatio R. Storer, September 18, 1922.

I think it is pertinent at this point to call attention to a fault of omission on the part of the Society in regard to Fellows who have died. This is not offered in any sense as adverse criticism of the Committee on Necrology, present or past, but rather of the custom which has gradually grown up of not taking formal notice by resolutions of a member's death. I believe a Society as prominent as this is should make a practice of drawing up resolutions upon the death of a member, rather than a birth and death date notice in the annual report. The Secretary will gladly co-operate with the Committee on Necrology in this manner, if the suggestion meets with approval.

It is with regret that announcement is made that the following were members dropped from the rolls for non-payment of dues, October 26, 1922: Harry V. Carroll, Abraham Fishman, B. H. Gilbert and William A. Mulvey.

There has been a moderate increase in the number of new members admitted. I wish to acknowledge at this time, the co-operation of the Secretaries of the District Societies, which has made it possible to extend personal letters of invitation to physicians to join the State Society.

The Society has been enriched by the gift of portraits of two former Fellows, that of Dr. Joseph Mauran, through the generosity of Mr. Edward Aborn Greene, and also one of Dr. George Wheaton Carr, which has hung on these walls for several years, but which, through the efforts of Dr. George Crooker, now becomes the permanent property of this Society. This is an admirable

thing and the Fellows are urged to use their influence with the families of deceased members for the presentation of portraits to adorn the walls of this building, and to be a lasting memory of former Fellows.

The various standing committees will make separate reports and therefore mention of their activities will not be made herein. The Committee on Scientific Program, however, wishes to express its appreciation for the cordial co-operation of the Fellows in preparing the programs for the quarterly meetings. The Secretary experiences a justifiable feeling of vindication of his oft-repeated claim that the Society comprises in its membership sufficient and wholly capable talent to supply all our needs for a scientific meeting.

Respectfully submitted
J. W. Leech, *Secretary*

Committee of Arrangement Reports:

"The Committee of Arrangements of the Rhode Island Medical Society reports that the collations have been furnished at each of the quarterly meetings during the past year, and the annual banquet on June 7th, 1923, will be provided through our efforts. Arrangements for this banquet are well advanced.

Respectfully submitted
Paul Appleton, *Chairman*

Committee on Legislation, State and National:

Last year the Legislative Committee asked the District Societies of the State to appoint Legislative Committees in each Society to co-operate with the Committee of the State Society. Four of the District Societies responded, namely, Providence, Pawtucket, Newport, and Washington County.

At a meeting of representatives of these Societies with our own Committee, some plans for a legislative campaign were discussed, in part being to have the Legislative Committee of the State Society keep the committees of the District Societies informed of any proposed legislation in order to work, when possible, through them on their local representatives. At this time it was the general opinion of the members present that it would be wise to systematize the work of the Legislative Committee and have some paid person keep in touch with all legislative proceedings and do whatever clerical work might be necessary. No definite recommendation was made, but the suggestion is incorporated into this report. The situation with regard to the legislative bodies at the State House seemed no likelihood of anything being done with reference to medical legislation. However, a bill to license chiropractors was introduced and at a hearing two of the members of the Committee appeared and spoke against the passage of the bill. The bill still remains in the hands of the Judiciary Committee and so far as your Committee knows is not likely to be reported out for action. The chiropractors expressed themselves at this hearing as being quite willing to accept an examining board which would consist of two regular physicians and one chiropractor. The bill as proposed, however, would license all those now engaged in practice of chiropractics and it would seem to the Committee that these men would be willing to accept any kind of an examining board so long as those who are at present established could continue. At a later meeting it was also proposed that it would be wise if some legislation might be initiated by our Society which would, if possible, place the licensing of all persons who are engaged in treating the sick in the hands of a single board, this to include chiropractors, osteopaths and any other cult which might arise having the treating of the sick as their object.

The following bills, which have more or less bearing upon the practice of medicine or public health, were considered at the State House during the present session:

Bill to license chiropractors. This bill has had a hearing and is still in the Committee and probably will not be reported for action. The Sheppard-Towner bill was brought up for consideration and was voted down. The Nuisance and Abatement Act. An act by which any citizen could close a house of ill repute by making complaint was brought up for a hearing but was killed in the Committee. A Bill to Increase the Appropriation for the State Board of Health was vetoed by the Governor. The Mothers' Aid Bill was passed. This bill appropriates a certain amount of money for the use of the State Supervisor for the purpose of defraying the expenses of bringing up and educating children under fourteen years of age, who otherwise would have no proper care. An act was passed in regard to the registration of births, deaths, and marriages and provides for the binding of records to be kept by the State Board of Health for easy references. A bill was passed

for the protection and safeguarding of children working in industrial occupations. No child under fifteen shall be employed in any industrial work, nor shall any child under sixteen be employed in any industries where there is any hazard. Previous to this, the law applied only to children under fourteen.

Four or five towns have appropriated money for the aid of the Red Cross and Nursing Associations. The Maternity Aid Bill is under consideration, which, if passed, would prohibit pregnant women from working a certain period before and after confinement and provide some aid for them.

Your Committee made some attempt to keep in touch with what legislation was under consideration, but to do that requires considerable time and attention and the suggestion is made that there be provision for a secretary to this Committee, whose business it would be to keep in touch with all subjects which have any relation whatever to medicine or public health and report to the Committee, and that this Secretary should be paid.

FRANK T. FULTON, *Chairman*

Committee on Library:

There is little to report concerning the work of the Library save the bare figures of the acquisitions.

The Library has received 247 books, 201 reprints and 229 pamphlets. Of these only eight were new books purchased.

No binding has been done, but we have been granted by the Providence Medical Association the sum of three hundred dollars for that purpose. This donation is very much appreciated, and our hearty thanks are due to the Association for it. It will enable us to complete our files of bound volumes of some of the periodicals which are most often consulted.

We would call your attention especially to the fact that the Library has bought only eight new books this year, probably fewer than most of the Fellows have individually bought. Unless we buy contemporary works, the Library will be very far from being as complete in future years as it is at the present time. We are rich in the works of the nineteenth century and before; we ought to keep up the standard.

H. G. PARTRIDGE, *Chairman*

Committee on Publication:

As Chairman of the Committee of Publication, I beg leave to offer the following report of the year's activities:—

In the publishing of the RHODE ISLAND MEDICAL JOURNAL, three factors appear to me to be of essential importance. First, that the JOURNAL shall be self-sustaining. Second, that it shall be of sufficiently scientific interest to appeal to and interest the physicians of the state, and, third, that every community of the state shall be represented.

Of the first of these, while we have not attained a financial plethora, we need entertain no anxiety; we are upon a firm foundation and in the vernacular of the day, we are "still going strong."

Of the second, the editor is in receipt of sufficient literary material from the various medical societies and individuals to publish, at least two original articles in each issue, with no indications of dearth for some issues to come and he has had occasion to, somewhat reluctantly, turn back several articles, or hold them in suspense.

The third factor is still one of open conjecture; my hope is that the JOURNAL is still welcome in the more remote communities. The Editorial Department has made representations at different periods to every district society of the state and to various members thereof, of the desirability and mutual advantage of a closer association, and though the result has been in most cases as a hope deferred, we do not despair.

There has been one change in the executive department; that of Business Manager. While we were most reluctant to accept the resignation of Dr. B. H. Buxton, we have been fortunate in securing Dr. Frank Mears Adams for this important office.

As a whole, while we aspire to higher literary standards, the present duties of publication are neither difficult nor disagreeable; although it must be always borne in mind that the publication of even a small periodical is a business proposition and must be treated as such. Languid methods have no place and are not desired in any business enterprise. Everyone associated in any way with the publication of the JOURNAL, whether in administrative or executive capacity, has the appreciation and, I may say, gratitude of the management and is again requested to express his individual interest, with willingness and promptness in the discharge of his accepted obligations.

Respectfully submitted

FREDERICK N. BROWN, *Chairman*

Committee on Education:

The Committee on Education, State and National, has been inactive during the whole year. I feel that a new Committee might accomplish more.

CHARLES O. COOKE, M.D., *Chairman*

Curator—No report. Committee on Necrology—No report. Historian—No report.

Board of Trustees:

The Trustees held a meeting early in July to consider the bids on the painting for which the Council had granted them the necessary funds at the Annual Meeting. The bid of Crawley & Smith was accepted and work started July 20th. The reading room, Miller room, coat room, hallways and hall on the second floor were included in the work done.

During the year some other minor repairs have been made and the screens have been repainted by the janitor and are ready for use.

It became necessary to change the janitor this spring, as Mr. Hanley had a better position offered him. A new one has been secured and his work so far has been satisfactory.

Two conventions have been held here during the year, that of the Eastern Section of the American Laryngological Rhinological and Otological Society (January 27), and the New England Hospital Association on the 16th and 17th of this month.

WM. F. BARRY

The foregoing reports were ordered accepted and placed on file. A communication from the Secretary of the A. M. A. in regard to changing the rule of dropping members in arrears for non-payment of dues for 2 years and 60 days, was presented by the Secretary. It was voted to be laid on the table.

The following resolution was introduced by the Secretary:

"Whereas, the Rhode Island Medical Society is deeply interested in the rehabilitation of the disabled veteran on the one hand, and on the other vitally concerned in upholding the standards of medical practice, and whereas the Director of the Veterans' Bureau has adopted measures to abate the vicious practice of giving governmental aid for the training of veterans as chiropractors:

"Be it Resolved, That the House of Delegates of the Rhode Island Medical Society commend the Director of the Veterans' Bureau for his action, which is in the interest of the veterans as well as the public, and be it further resolved, that a copy of these resolutions be sent to the President of the United States, the Select Committee of U. S. Senate on the Investigation of the Veterans' Bureau, to the senators and representatives from Rhode Island and to the American Medical Association."

The foregoing resolution was unanimously adopted.

It was voted that the annual dues be $10.00 for the coming year. Adjourned.

J. W. LEECH, *Secretary*

PROVIDENCE MEDICAL ASSOCIATION.

The regular monthly meeting of the Providence Medical Association was held at the Medical Library, 106 Francis Street, Monday evening, June 4, 1923, at 8:45 o'clock, and the following program offered:

Paper, "Obstetric Shock," Dr. Albert H. Miller, with lantern demonstration. Discussion by Dr. R. H. Carver, Dr. H. G. Partridge, Dr. Paul Appleton.

Collation followed.

DR. PETER PINEO CHASE, *Secretary*

NEW ENGLAND HOSPITAL ASSOCIATION.

The second Annual Meeting was held May 16 and 17, 1923, in the Rhode Island Medical Society Building, 106 Francis Street, Providence.

WEDNESDAY, MAY 16, 1923

10:30 A. M.—Executive Session.

11:00 A. M.—"Fuel Oil," Dr. John M. Peters, Superintendent, Rhode Island Hospital, Providence, R. I. Discussion—Dr. Frederic A. Washburn, Director, Massachusetts General Hospital, Boston, Mass.

11:30 A. M.—"The Hospital as a Factor in Rural Community Life," Mr. Benjamin Williams, President, Vermont Hospital Association, Proctor, Vt. Discussion—Dr. George H. Stone, Eastern Maine General Hospital, Bangor, Me.

12:00 M.—"The Contagious Problem of the General Hospital," Dr. Edwin H. Place, Physician-in-Charge, South Department, Boston City Hospital, Boston, Mass. Discussion—Dr. Dennett L. Richardson, Superintendent, Providence City Hospital, Providence, R. I.

2:30 P. M.—"The Responsibility of the General Hospital in the Control of Venereal Disease," Miss Ora M. Lewis, Department of Syphilis, Massachusetts General Hospital, Boston, Mass. Discussion—Dr. Thomas S. Brown, Medical Superintendent, Mary Fletcher Hospital, Burlington, Vt.

Round Table.

THURSDAY, MAY 17, 1923.

10:30 A. M.—"The Service of the Out-Patient Department to the Community," Dr. Charles E. Wells, Asistant Director, Massachusetts General Hospital, Boston, Mass. Discussion—Dr. William O. Rice, Rhode Island Hospital, Providence, R. I.; Dr. James R. Miller, 179 Allyn Street, Hartford, Conn.

11:00 A. M.—"The Problem of the Hospital Employee," Mr. Charles Lee, Superintendent, Waterbury Hospital, Waterbury, Conn. Discussion—Dr. J. F. Bresnahan, Superintendent, Bridgeport Hospital, Bridgeport, Conn.

11:30 A. M.—"Some Aspects of Modern Nursings," Miss Jessie E. Catton, Superintendent, New England Hospital for Women and Children, Boston, Mass. Discussion—Dr. W. C. Rappleye, Superintendent, New Haven Hospital, New Haven, Conn.

12:00 M.—Election of Officers.

2 to 5 P. M.—Visiting local hospitals. Members of the Association are invited to visit the following hospitals: Butler Hospital, Rhode Island Hospital, St. Joseph's Hospital, Woonsocket Hospital, Memorial Hospital, Providence City Hospital, R. I. Homeopathic Hospital, Providence Lying-In Hospital, Newport Hospital.

HOSPITALS

MEMORIAL HOSPITAL.

The regular monthly meeting of the Memorial Hospital Staff was held June 5, 1923, Dr. James L. Wheaton, President, presiding. There were about twelve members present. The reports for the various hospital services were gone over by the different members of the staff.

Dr. Frederic V. Hussey reported an interesting case of adeno-carcinoma of the large intestines, and Dr. John F. Kenney presented the pathological specimen.

It was voted to have no meetings during July and August.

JOHN F. KENNEY, M.D., *Secretary*

OBITUARY

At a Special Meeting of the Westerly Physicians' Association held May 31, 1923, the following resolutions were unanimously adopted:

Whereas, The Great and Supreme Ruler of the Universe has, in His infinite wisdom, removed from among us one of our most worthy members, Doctor John Lawrence May, and

Whereas, The long and intimate relations with him in the faithful discharge of his duties to this Association makes it eminently fitting that we record our appreciation of him, and therefore be it

Resolved, That the wisdom and ability which he exercised in the aid of our Association, by service, contributions, and wise counsel, will be held in grateful remembrance;

Resolved, That the removal of Dr. May from our midst leaves a vacancy and shadow that will be deeply realized by all the members of our Association, and will prove a serious loss to the County and State Societies as well;

Resolved, That with deep sympathy with the bereaved relatives of the deceased, as well as the large constituency that he so long and faithfully served during his lifetime as an honest, upright, and faithful physician, we express our hope that even so great a loss to us all may be overruled for good by Him who doeth all things well;

Resolved, That a copy of these resolutions be spread upon the records of this Association, a copy printed in the RHODE ISLAND MEDICAL JOURNAL, and a copy forwarded to the bereaved family.

MICHAEL H. SCANLON, M.D.
JOHN CHAMPLIN, M.D.
WILLIAM A. HILLARD, M.D.
Committee

CASE REPORTS

PNEUMOCOCCUS MENINGITIS.

DR. H. P. B. JORDAN
CITY HOSPITAL.

J. G., 2 months of age, referred to hospital from a baby boarding house as a diphtheria contact. Ad-

mitted April 8, 1923, with normal temperature, pulse and respiration. Physical examination entirely negative. Nose and throat positive for diphtheria bacilli, and a small dose of antitoxin was given. Patient gained weight until April 17, 1923. Began to cough April 15, 1923, and coughed until April 21, 1923. Lost weight from April 20, 1923, steadily. On the morning of the 23rd temperature rose suddenly to 103 by rectum, April 24, at 11 P. M. had convulsion. Physical examination showed double Kernig, stiff neck, bulging of fontanelle. Lumbar puncture done, fluid under pressure, cloudy appearance. Laboratory examination revealed type 111 pneumococcus. Died April 26, 1923.

Autopsy revealed right lobar pneumonia, involving one-half of upper lobe, from which type 111 pneumococci were isolated. The cerebrum, cerebellum, pons, and medulla covered with a thick layer of exudate. No involvement of middle ears.

REPORT OF A CASE—HEMATOCOLPOS.

WILIAM NEWTON HUGHES, M.D.
RHODE ISLAND HOSPITAL.

An Italian girl, age 13 years, E. DiF. C. C. indisposition and obstipation. F. H. essentially negative. P. H. essentially negative. P. I., for the past five days patient has complained of not feeling well, though she would not tell her parents definitely where her trouble was. Noticing that she was markedly constipated, they sent her to a doctor, who made a rectal examination, and then sent her to the R. I. H. for intestinal obstruction, so called. With this diagnosis she was admitted to the medical service, where, on routine examination, she was found to have an imperforate, markedly bulging hymen. Transfer to the gynecological service was made with a diagnosis of hematocolpos. P. E. Rectal examination disclosed a large, hard, somewhat round mass anteriorly about four or five times larger than a normal uterus. This mass obstructed markedly the lumen of the rectum. Vaginal inspection disclosed an imperforate hymen bulging convexly about an inch beyond the level of the labia majora, with fluctuation easily demonstrable. This was nicked with a small knife, and dark brown blood gradually trickled out. The rest of the physical examination was negative.

Notes.

Two days after admission a crucial incision was made in the imperforate hymen and a large quantity of thick, brown-black blood ran out. Examination showed a large, patulous cervix, a retrodisplaced, somewhat fixed fundus, and appendages not palpable. During her stay in the hospital patient refused to allow proper examination; to take medicine ordered for her; and to answer questions. Her hair was dishevelled, her pupils widely dilated, and a general look of terror never left her face during her stay. She was apparently under great psychic strain. On discharge, eleven days after admission, the opening in the hymen remained and the cervix and uterus were found to be small.

Discussion.

Cases of hematocolpos are very rare. Intrauterine closure of the hymen, according to Veit, is always noted at or soon after birth, since the uterus is stimulated to hypersecretion and bleeding at birth, thus forming hematocolpos, with its attending symptoms. The uterus after birth remains inactive till puberty, so that extrauterine closure of the hymen is practically never noted until that time. Closure of the hymen after birth is thought to be due to trauma or infection. A small nick was made in the hymen on admission, as a sudden contraction of the uterus following a large incision is thought by some authorities to force blood into the fallopian tubes. The dangers of imperforate hymen with hematocolpos are the extension of the swelling to the uterus and tubes (hematometra and hematosalpinx), with the possibility of infection and peritonitis, as well as the destruction of the internal genital organs. Graves recommends complete peripheral excision of the hymen, as foul leucorrhea and pronounced sepsis may follow crucial incision.

THE RHODE ISLAND MEDICAL JOURNAL

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ORIGINAL ARTICLES

DIET IN THE TREATMENT OF DIARRHOEA IN INFANCY*.

By Dr. Wm. P. Buffum, Jr.
Providence, R. I.

This brief paper deals with diet in *acute* diarrhœa in infancy. The looseness of the bowels associated with the more chronic conditions due to the improper digestion and absorption of certain food elements will not be considered here. Diarrhœa also occurs in association with parenteral infections such as tonsilitis. This *may* develop into a condition which requires special treatment but it is usually very transient.

The acute diarrhœa can be divided into *two types* or *classes,* for the sake of convenience in discussion. One type, which is not very common in Providence for the last few years, is the real old-fashioned ileocolitis. The chief pathology is an *invasion of the intestinal mucous membranes* by microorganisms causing intense inflammation and superficial ulceration. It is characterized clinically by a temperature which remains elevated in spite of appropriate treatment, and usually by some blood in the stools.

The other type of diarrhœa may be called *the usual type.* Under this heading come the *mild upsets and indigestions* which occur chiefly in summer, and also the severe and sometimes fatal *gastrointestinal intoxications.* Many causes are given for these conditions, including excessive or sustained heat, chilling, improper feeding, improperly kept milk, and infection from feces by lack of sufficient care and sanitation. There is considerable evidence that the *chief cause of diarrhoea is contamination by fingers, food, flies and so forth, which causes bacteria from the feces to enter the mouth.* At any rate, after the condition is started, the morbid process consists in the action of microorganisms on the *intestinal contents* producing in the intestinal contents irritating and toxic substances which by their action stimulate the intestine to overaction.

I do not mean to give the impression that these two types of diarrhœa are definite, and that any case can be readily placed in one class or the other. It is frequently exceedingly difficult to state whether in a given case the infection is a true ileocolitis with an infection of the intestinal wall by one of the dysentery organisms, or whether the infection is of the usual type and is confined to the intestinal contents. There may be a large number of cases all obviously similar occurring at the same time which are difficult to classify and not uncommonly the two types occur together, an *ileocolitis* infection taking place during the course of a *simple* diarrhœa, nevertheless for the sake of discussion, it seems to me to be better to consider the two types as definitely established.

About the *diet* in the first type, ileocolitis, I have little to say except to state the old text-book principles. Unless the case is of considerable duration with marked exhaustion, the *initial catharsis* and *24 hours on barley water* is indicated. I believe that an *ounce of sugar* in a quart of barley water does no harm and is of considerable advantage in furnishing some nourishment and in making the food more palatable. After the first 24 hours, if there is no vomiting, the food should be gradually increased. It is impossible to determine from *personal experience* what is the best form of feeding, as the cases have a distinct tendency to run their course severe or mild, according to the nature of the infection, etc., without reference to the diet. It is generally believed that it is best to *avoid sweet milk* and that *skimmed lactic acid milk or protein milk* forms the basis of the best diet. This should be given well diluted and in small quantities at first and with it *plenty of cane sugar or malt sugar or glucose.* Some have found the *powdered milks,* which contain a *low fat,* such as malted milk or a skimmed milk powder, satisfactory. Especially in small babies, the *ability to handle fat* is very poor during and for some weeks or months after this attack. There is reported by several competent observers an ileocolitis caused by a *gas producing bacillus* in the

*Read before the Rhode Island Medical Society, March 1, 1923.

treatment of which *lactic acid milk* acts as a specific.

The diarrhœas which are not included in the term ileocolitis and which I have grouped together as *the usual type*, vary considerably in their nature and severity. A common and mild form is seen in which the baby has from two to ten loose stools daily which are bright yellow or light green, often strongly acid in reaction with the sour milk odor and containing more or less mucus, and in which the constitutional symptoms are slight. All degrees of severity are seen, including the so-called *intoxication cases*, where through loss of fluid and malnutrition, extreme *dehydration* and *acidosis* develop and death rapidly follows.

In a simple case, as I have said, the pathological process seems to be the action of bacteria on the intestinal contents, causing the formation of irritating and toxic substances. It is impossible at present to say what these organisms are and where they come from. The intestinal flora are so abundant and diverse that no one has been able to identify the offending organism. It has been assumed that the disease is spread in much the same manner as typhoid fever, by direct contagion and by general lack of sanitation in connection with existing cases and carriers. It has also been assumed that under certain circumstances, where the baby is in poor condition, due to heat, indigestion and so forth, that bacteria usually harmless and normally inhabiting the intestinal tract may cause intestinal disease.

The *irritating substance* produced by these bacteria seems to usually consist of the *lower and simple fatty acids* which are formed from both the fat and the sugar of the milk. The connection between the diarrhœa and the presence of these fatty acids is pretty definite, especially in the cases where the stools are strongly acid.

The indications for treatment are to *clear out* the existing irritating substances, to furnish a food *least favorable to the formation of these fatty acids,* and to make the intestinal contents as antagonistic as possible to the *growth of these organisms.* The initial dose of castor oil and 12 to 24 hours starvation is indicated unless the patient is already exhausted by a protracted disease. *Sweet milk* is contraindicated unless the disease is extremely mild. The logical diet is one high in *protein* and low in *fat and sugar.* This not only furnishes a poor medium for the development of fatty acids, but the breaking down of the protein produces alkaline substances which inhibit the growth of acid producing organisms. This type of diet, high in protein and low in fat and sugar, is best furnished to a bottle baby by *protein milk.* Protein milk consists of one pint of butter milk, one pint of water and the curd from one quart of sweet milk. Protein milk may be given straight or diluted with water. This treatment works like a charm in many cases and in the greater number of cases seems to be the best diet. It is most sure to work well where the stools are strongly acid with a rancid fat odor. In some cases and some groups of cases protein milk does not work well and while on this diet the temperature has a tendency to be raised, the stools remain loose and the general condition of the patient does not improve. In the summer of 1920, the diarrhœa prevalent here was of a definite type, the temperature was apt to be raised for several days, the stools were profuse, watery in consistency, nearly colorless, and the prostration was great. In this group of cases protein milk did not act favorably. Protein milk is also likely to be unsatisfactory in young babies *under 3 months of age* and in *feeble* or *exhausted babies.* Apparently the *low sugar* in this diet by depriving the patient of the form of nourishment most easily and rapidly assimilated acts unfavorably in these cases, causing weakness and collapse. *Protein milk alone* should be given only while the baby is under observation, and either sugar or starchy food should be added or the diet changed entirely as soon as possible.

Another form of treatment is to make a diet composed only of some form of *sugar and flour* without any milk. A form in which I have used this has consisted of an ounce of cane sugar, an ounce of one of the maltose and dextrine preparations and one-half ounce of barley flour to the quart of water. A mixture such as this, although not sufficient to supply the *nutrition needed,* is satisfactory for a few days, as the *caloric value is considerable* and in an *easily available form.* This kind of diet is very useful as a temporary expedient in feeble babies and in other cases where protein milk does not work well, where it is not available, or where the case is not of sufficient severity to make the labor of making protein milk necessary. Why does such a diet as this work? Ap-

parently from the intestinal contents produced by a carbohydrate diet, the bacteria are usually *unable to produce the toxic substances* which are formed from a milk diet. After having the baby on such a diet, some form of milk is added in small quantities. Usually, I believe, if the case is of any great severity, *fat free lactic acid milk* can be taken best at this time.

If the diarrhœa is of a severe type, and especially if it is allowed to go on for several days before the diet is changed, the severe so-called *intoxication symptoms develop.* The temperature is likely to be about 104°, the surface of the body becomes cold and pale, the eyes sunken and the whole appearance is that of a very sick baby. In the last stages the breathing becomes both deep and rapid, indicating the presence of acidosis, and if this stage is allowed to continue for several hours death ensues. The process which has taken place seems to be chiefly one of *dehydration.* The loss of fluid from diarrhœa, vomiting, natural evaporation increased by fever, and failure to take in sufficient fluid has depleted the body. This finally results in a diminuation of the *blood volume* with a *concentration* of the blood, a decrease in the circulation and a failure of the *kidney* to secrete. Apparently the *acidosis* is due chiefly to the failure of the kidneys to *eliminate acid substances.*

The chief indication for treatment in this condition is therefore to get water into the baby's body and especially into his blood stream. To *check the vomiting* the frequent administration of a small amount of a weak solution of sodium bicarbonate and water is generally the most valuable remedy. This washes out the stomach and is generally retained later. If this fails it is best to give nothing by mouth for several hours. Considerable fluid can be given by *rectal irrigation.* This method is especially valuable when the child is not very sick and when it is thus not so important to be sure that the fluid is retained. If the case is at all urgent, the fluid must be injected *under the skin* or *into the peritoneal cavity* and probably the former is the best method. Even in a little baby *a pint of fluid* should be injected in the first 24 hours. *Ringers' solution* is said to be slightly better than saline, although the latter is generally used. In the most urgent condition of dehydration acidosis, in addition to the above measures, a rapid effect can be obtained by the injection of a *10% solution of glucose intravenously.* This glucose, by osmotic pressure, draws the fluid into the blood stream, thus increasing the *volume of blood* and the *circulation.* Alkalies have been given in these cases ever since it was discovered that an acidosis was present, but the effects seems to be very slight.

In conclusion, I should say that the two most important points to bear in mind in treating diarrhœa in bottle-fed babies are first to stop giving milk immediately, until it is evident that it is safe to give it, and, secondly, to always guard against dehydration.

Discussion.

Dr. Calder: I have little more to say. In discussing the other papers that followed mine, I simply want to emphasize that there are principles underlying successful feeding of babies. I think the secret of successful infant feeding in a case of diarrhœa, or any of the infant diseases, is the making of a correct diagnosis. It sounds a light sort of thing, and yet I see a great many men trying to feed babies in the wrong way, when, knowing what the trouble really is, it becomes a fairly simple matter from the portion of foods at our disposal to pick one out and remedy our trouble.

Dr. Robert M. Lord: It seems to me that it is rather an imposition on the other members of the Society to listen to me discuss the subject in hand, as I have had so little experience in private practice in that respect. The practice in hospital feeding is rather a different proposition, as you all know. You can let a baby that has cramps in the hospital cry all day, and it wouldn't matter, but you can't do that in private practice. Nevertheless, I would like to add my ideas on infant feeding. I believe that any intelligent and well trained physician can pretty well feed a normal infant, master any one of the methods of feeding and stick to it. Doctors Calder and Utter have given such a clear view on their methods of feeding infants that there is little more for me to say about it. There will always be a few babies who require the attention of a pediatrician and therefore require a more complicated feeding regime. But these cases are not the ordinary run of babies.

PROBLEMS OF PRESENT DAY UNREST.*

By Edmund B. Delabarre.
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The topic for discussion this afternoon was announced as "Persisting Psychological Effects of the World War," and was intended to deal especially with what we commonly refer to under the vague and comprehensive term "unrest." As I have reflected upon the question, it has assumed a somewhat broader form in my mind, involving a consideration not only of the nature of this unrest, but also of some of its particular causes and possible methods of cure; and not only of the psychological factors that belong to it, but also of others with which these are inextricably intermingled. As thus formulated, the field of inquiry is much too broad for comprehensive treatment in a single brief talk, and I shall touch upon only a few features of it that have emphasized themselves in my own mind, leaving it understood that numerous other considerations of equal importance must be left without mention.

Of the causes responsible for the world unrest of today and determining its nature, I wish to speak of three only—one of them largely economic, one intellectual, and the third biological and social, each of them being at the same time largely but not exclusively psychological. Of economic conditions we need not speak at length. They are very influential, but also very well known. The war was responsible for the introduction of great economic extremes and disorganization. On the one hand, it brought a tremendous amount of economic distress, arousing bitter conflicts of opinion as to how to remedy existing evils and calling for unusual efforts of charity, which may temporarily alleviate suffering, but which does not remove and may aggravate underlying causes. The healing of this appalling distress is a problem of immense difficulty that will demand a long time for its solution. In the meantime, the condition is so acute and of such magnitude as to induce much of the despair that makes effort seem useless, and so is responsible for a great deal of inactivity and unrest. On the other hand, the war led in other cases to a wide-spread increase of prosperity. High wages and large profits brought a great amount of financial ease. This condition also is one that tends to discourage effort, and to lead to an unhealthy, restless, easy-going attitude. With few exceptions, man is as lazy as circumstances permit. Necessity has been his spur to effort and progress. When blessed—or cursed—with easily garnered abundance, he may be active enough when he feels like it, but, for the most part, he does not work. Necessary but disagreeable tasks are avoided, amusement and not productive effort is the usual goal of activity; or, when work must be done, soft jobs yielding large and quick returns under easy conditions are demanded, the delicate adjustment of the economic mechanism on which the prosperous civilization depends becomes badly deranged, economic unsoundness and instability inevitably result. Even those who neither suffer nor prosper abnormally catch the infection of these disorders, and help to accentuate the trouble. Further complications arise from numerous other factors to which we can barely allude, such as demand for higher standards of comfort, diminution of purchasing power through high prices, burdensome taxation and other causes, disturbance of the normal flow of commodities, irregularity in the supply of materials and labor necessary for the smooth conduct of the delicate complexities of industry and commerce. With all this, there is a natural reaction from the strain of effort, of anxiety and excitement of war-time, a general relaxation that is profound and prolonged in proportion to the preceding strain, which leads to relative cessation of struggle and effort, and of serious facing of duties and problems. So we have mingled together as characteristic parts of the nature of the unrest that we are considering, a vast economic disorganization; a warfare of opinion, a lack of clear vision, and a working along conflicting lines among those seriously concerned with remedying it; and a very great deal of indifferent or helpless inactivity.

The second group of causes that have led to present conditions, I have called predominantly intellectual. The world, on the whole, has grown too intelligent to accept many old ideas, even such as have seemed to be necessary foundations on which the social and moral order rests; but it has not, on the whole, become intelligent enough to see clearly on what new ideas our future intellectual, social and moral sanity can be securely founded. There has been an unprecedentedly rapid increase in exact knowledge, but very inadequate coordination of it and adjustment to it. We are in a time of transition between a fairly well understood, though imperfect, old conception of the universe, and a not yet attained, but fuller and better new conception. Such periods are inevitable, and this one would have come without the war, though it has perhaps been accelerated and

* Abstract of a talk before the Rhode Island Medico-Legal Society January 25 1923.

intensified by the war. It is a necessary stage in progress, for progress of every kind demands that advance be not continuous, but consist of periods of evident growth, alternating with periods of apparent stagnation. These latter, however, are not times of real halting, as they seem. They are like the stages in the advance of an army, when it must consolidate its position after moving forward. What has been won and accumulated must be organized, digested, harmonized, adjusted, fully comprehended, unified as a foundation for new advance. Such times of transition are, therefore, times of progress too, though no new ground is gained; but they are also necessarily times of confusion, uncertainty, mal-adjustment, disharmony, unrest. They involve a breaking away from old ideas and conventions, with nothing sure and widely acceptable to take their place. There results a great variety of confused opinions and attitudes, each appealing temporarily to limited groups. On some, the effect is to paralyze thought and effort: the problems are too difficult for them, or no concern of theirs; they make no serious attempt to understand or solve them, they readily disregard the undermined old standards, and with nothing in their place, become frivolous, uncritical, unconventional, thoughtless, indifferent, careless and care-free. Great numbers of others, more serious in their attitude, but incapable of clear thought and broad vision, are open to the lure of the most visionary theories. Many people of the highest intelligence belong to this class, and therein lies its great danger; for there are but very few who in all these complexities can think widely and deeply and truly. At the best, none of us have time and energy to arrive at sound first-hand conclusions on more than a very few subjects. The majority of opinions are based upon early instruction, emotional appeal, suggestion, incomplete information, statements of others who are trusted as authorities; and it is easy to choose authorities unwisely, and to be misguided without being unintelligent. Consequently, mistaken and half-true ideas flourish. Noble ideals are fought for, more often by the impractical and harmful method of destroying the old, and trying to magically will the new into existence, rarely by the only workable method of comprehending the mechanism, the slow steps and influences, which alone can bring them into existence, and thus gradually and laboriously effecting their sure evolution. Quackery and charlatanry abound in thought and practice. The get-rich-quick type of idea prevails widely—the idea of becoming rich or well or good, or of making the world well ordered and peaceful, by magic and wish and luck, with a minimum of effort, instead of by the slow and difficult method of understanding, and using causally working mechanisms and evolutionary processes.

Two typical, but mistaken, attitudes, differing from the shallow and careless, and from the serious but misguided, just described, deserve especial emphasis. A prominent feature of the recent enormous growth in exact knowledge has been that it involves a great extension of the deterministic conception of the universe. Determinism is the belief that all the phenomena of the universe, physical and mental, occur in obedience to invariable, unbroken and unbreakable laws of causality. The universe is a mechanism, no powers, spiritual, mental or vital, exist that interrupt its rigidly determined flow. Life and thought, feeling and human action, are as much subject to this mechanistic determination as are the processes of inorganic nature. There is a difference only of complexity, never in essential nature, in the causal laws that work without exception in all these cases. Everyone knows that this idea is gaining wide acceptance and increasing strength. To the great majority, even of intelligent people, its acceptance seems incompatible with a belief in anything truly spiritual or moral. As a consequence, there are two most common attitudes toward it, both of them natural, but both mistaken. The one clings with devotion to a belief in spiritual and moral truths, and thinks that to retain them we must oppose the new conceptions, must fight against the belief in evolution, the mechanistic doctrine of life and the deterministic views of psychology. The other claims, quite as indefensibly, that the newer conceptions are true, but that to hold them, we must give up the outworn beliefs in God, in freedom, in duty, in morality. The true belief that reconciles and takes the place of these two opposing ones, will receive discussion among our final conclusions.

The third set of causes for present unrest I characterized as largely biological and social. I allude to considerations that are set forth in detail in such books are Lothrop Stoddard's Revolt Against Civilization and similar discussions. Stoddard tells us that civilization is both a recent and a fragile thing. The burden of its support is borne by a very small number of superior men. Civilizations of the past have vanished, not because of any inherent law of unescapable decay, but because they have permitted their superior stocks to deteriorate. Ours, too, will perish, unless we can learn how to offset this tendency and take effective action to apply the knowledge. The Army Intelligence Tests were applied to nearly two million Americans during the war. While not perfect, they have a high degree of reliability, and are to a considerable degree indicative of the

distribution of intelligence in the country as a whole. The results have been announced in many different, including some misleading, ways. The ordinary way of stating them is to say that they reveal about thirteen per cent. of men of A and B grade, defined as of superior intelligence, about sixty per cent. of C grade, defined as average, and about twenty-five per cent. of lesser grades, defined as inferior. The latest authoritative statement has been made by Robert M. Yerkes, in the *Atlantic Monthly* for March, 1923. In terms of the "combined scale" of intelligence, ranging from zero to twenty-six points, of the men of the white draft, about twelve per cent. fell within the highest third; about nineteen per cent. in the highest two-fifths, and sixty-two per cent. in the middle fifth. In this group, at least, the really superior are relatively few. Other studies have proven that the relative number of superiors tends to diminish because of lower birth-rates, and of inferiors to increase. For example, it is estimated that whereas 1,000 college graduates of today will have but fifty descendants 200 years hence, the same number of Rumanians now in Boston will have 100,000 descendants at that time. Morever, recruitage from middle and lower to superior classes constantly diminishes. Still other studies have proven that the type of superiority in question is wholly a matter of evolution and inheritance. Favorable environment and institutions, education and opportunity, do not affect it as an inherent quality. These are good in themselves, determining how far the individual develops the capacities that he inherits; but civilization cannot be saved by them, but only by counteracting the tendency to an ever growing diminution in the relative proportion of those superiors by inheritance, who are its only possible builders and preservers. With the fast increasing complexity and burden of political, social, scientific and commercial systems demanding constantly higher abilities and more numerous men of the highest type, and the supply of these threatening to become insufficient, with the middle intellectual classes able only to follow under right guidance, but not to lead, and with the more prolific inferiors actively rebelling against the institutions of civilization which they cannot understand, and from which they cannot profit, we naturally suffer from an unrest that can never cure itself unless it can solve this problem of maintaining a sufficient supply of superior individuals and of control over the inferiors.

There are abundant causes for the serious conditions of unrest that we are considering, including many others besides those that have been mentioned. Can we see any definite hope of effective remedies? Of course, we may take an optimistic attitude, and have faith that the race will solve its problems successfully, and will continue to progress in spite of difficulties. But we should remember that an optimism that sits idle, letting things take their course, is evil and unwarranted. The only optimism that is healthy and justified is the kind that says that things will turn out right only if we devote our best thought and efforts to making it do so. This kind helpfully encourages us, but does not itself show us just how to go to work. We still need suggestions about that. Here again the field is large, and I can mention only a few considerations. How the economic difficulties are to be met, I am not equipped to say, and can only fall back personally on the belief that if other conditions can be dealt with successfully, these economic troubles will find their solution. Among the many definite hopeful methods in sight of solving our problem, I shall mention only three. The first remedy that I suggest is the one developed at length in Stoddard's book. To insure the continuance of a safe and sufficient proportion of superior men to guide and preserve our civilization, we must apply the methods of eugenics—the science of controlling human heredity along desirable lines. This science has learned much, and will learn more, about the exact laws of heredity. On their basis, it is ready with numerous suggestions for the betterment of the quality of the race. The methods are sure, practical, human. If we can make up our minds to apply them, they will solve this most fundamental and urgent of our problems. If we lack the intelligence or the courage to do this, our civilization is in grave danger of an irrevocable deterioration. What the methods are in detail we have not time to specify, but they can easily be learned by a reading of Stoddard, and of books on eugenics. We have much of the necessary knowledge, and the choice of applying it or not. It is a question of which we are going to do.

My second remedial suggestion is this: We who have the clear insight, must strive to make clear

to all that there is no genuine antagonism between religion and science, between freedom and determinism, between spiritual values and mechanistic methods, between idealism and enlightened common sense. Neither need sacrifice any of its essential beliefs, but only its denial of the equal validity of the other. An idealism that floats in the clouds, and a materialism that sees only the ground, are equally blind and impractical. If we can but realize that spirit must and does work only through mechanism, because it is orderly and consistent, and that mechanism is never soulless, but always the voice and method and sole revelation of spirit, there is no antagonism. Determinism and mechanism do not imply blind, lifeless powers, nor does scientific description of phenomena and processes imply materialism. This is absolutely true, but is exceedingly difficult to realize. Equally, idealism and spirituality do not rightly imply magic and miracle, thin ghostliness and indeterminism. If we could seek for evidence of the divine and spiritual, not in miracle, not in signs and wonders, but in regularity and order and consistency, we would have a surer and saner foundation for both our religious and our scientific faith. The idealism that joins hands harmoniously with science, and the science that allies itself consistently with idealism, hold that the world is truly One Spirit, eternal, purposeful, perfect in its real nature, but manifesting itself fragmentarily to observation as a causally determined series of mental and physical phenomena. The business of science is to describe the phenomenal appearances and their unbroken causal workings; of philosophy, to interpret them as manifestations of spiritual meanings and purpose and working power. This is God's world; but God works materially only in the form of physical causes, in our finite minds only in the form of deterministic mental law which runs parallel with the physical happenings. As we all share in His being, so we share in His spirituality and freedom; but, like Him as a whole, we express our nature phenomenally only in the form of activities that are to be scientifically described as having only mechanistic physical and mental causes. The only miracle is the miracle of complete orderliness, which divinely appoints deterministic causation as the only agent in the execution of its purposes, and divinely establishes every act of free finite purpose in its fitting place as a member of the causal sequence. It is the definiteness and consistency of God's nature and of our own truest character that expresses itself in these rigid laws. They are not dead materialistic powers that bind us and Him; but laws that He and we, in harmonious union and in the deepest sense, make use of to manifest our spiritual nature in consistent and appropriate phenomenal form. So long as we hold to the conception that the finite flow is according to regular and invariable principles, physical science may describe these as causal mechanism, biology and psychology may substitute the idea of a gradual unfolding or exfoliation, or manifestation in appropriate successive stages of organic growth and evolution, and religion may insist that they are the finite embodiment of eternal divine purposes, all with equal truth and mutual consistency. In his groping toward truth, man has unfortunately, yet inevitably, based his spiritual or religious beliefs on an indeterministic foundation. If that alliance is held, religion must eventually disappear. It is continually forced to compromise, struggling against the advance of science, but yielding step by step, yesterday to Copernicanism, today to evolution, tomorrow to complete determinism. But a religion that accepts unbroken determinism as the finite expression of its eternal truths, has no need to compromise or yield. It regains its entire kingdom. It believes in nothing that acts in the finite world contrary and superior to the scientifically expressed laws of nature; but it interprets the truth and source of these in spiritual terms. Freedom and responsibility do not rest on freedom from law and consistency. True freedom means only freedom to use law as a conscious part of unbroken universal mechanistic law, in order to attain our purposes. That freedom, within the limits that experience reveals as practical, determinism, and determinism alone assures us. This consistent and well founded union of idealism and science leaves us with many difficult problems. But they are far less serious and difficult than the problems that belong either to an idealism or to a science, each of which holds itself the only truth and opposes the other. It has the further advantage that it envisages a world that, so far as our finite minds can grasp it, is harmonious, consistent, unified, and not disjointed and chaotic—a world eternally spiritual in its being and purpose, causally mental and material in its finite appearance and unfolding.

My third and final suggestion is one not for immediate adoption, but rather strongly indicated as a desirable possibility for the future. Psychology has developed methods of determining the innate intelligence of individuals. No one claims that these tests are perfect and infallible. But they have a high degree of reliability already, are in use for many important practical purposes, and are sure to receive further development and perfecting. We have not as yet any correspondingly reliable tests of moral qualities and of character, though a beginning has been made toward devising them. It is a more difficult task, but nevertheless one that will some day be solved. Let us suppose that the time will come when we can, by such tests, confidently determine, not only the intelligence of an individual, but also his honesty, his courage, his initiative, his loyalty, his selfishness or generosity, his openness to appeals for action that is for the interest of his group, rather than that of himself. his degree of energy, and whether it expends itself on trivial and personal aims, or is more readily devoted to remoter, wider, more important ends. Such tests, once made truly reliable, would be of immeasurable service in the most varied ways. One of their applications would almost surely be the development of a new and better type of democracy, one that while insuring so far as possible equality of justice and of opportunity, would recognize the unescapable inequality of capacity and of fitness for different activities. We need only to have some dependable way of measuring intelligence and character, in order to say that no one below a certain standard in these qualities shall be allowed to vote; that those above this standard, but below a certain second higher standard, may vote, but not hold office; and that those exceeding the higher standard may vote and hold office. Inasmuch as offices are of many degrees of difficulty, the standards of intelligence and loyalty demanded for each could be effectively graded. I look with confidence to the coming of a time when these things can be done; and I have confidence that when we possess sure tests of the fitness of individuals to hold office and to vote, the people will see to it that only the fit shall exercise these functions. It may be that we need not even wait for character tests to be developed, for already the intelligence tests alone show a high degree of correlation with traits of character, and would thus suffice for a good beginning. On the whole, persons of high intelligence are very apt to be persons of high character also. Even in the exceptional cases, it may be that Frazer is right in claiming that "more mischief has probably been wrought in the world by honest fools in high places than by intelligent rascals." There is no need to dwell upon the manifest superiority of a system of government so organized, and there is every reason why we should hope that its adoption may not be long delayed.*

We have traced some, but only a few, of the important causes that have led to the unrest and instability of the present. We have suggested some, but only a few, of the directions in which we may hopefully look for influences that can remedy it. The condition is not one that can cure itself without the best efforts of all of us. We must work hard for the gaining of knowledge, for the spread of sound doctrine, for the suppression of destructive ideas and forces. In many cases also, we shall need not only knowledge and work, but the courage to break away from old conventions and prejudices, and to adopt and enforce the new effective methods that scientific study has taught us.

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*These suggestions are not without vigorous support from other writers. Since this talk was given, a number of instances have come to my notice. For example, James G. Fraser (Golden Bough, Abridged Edition, p. 47) says: "Everything that helps to raise society by opening a career to talent and proportioning the degrees of authority to men's natural abilities, deserves to be welcomed by all who have the real good of their fellows at heart." Hudson Maxim (quoted in *Literary Digest,* March 17, 1923, p. 28) remarks: "The greatest invention yet to be made is the one that will be of the greatest service. It is a method of government whereby the common people may be self-governing, and at the same time be prevented from committing political and social suicide through the enfranchised ignorance and avarice." Frank Exline, in his recently published book entitled "Politics," advocates the use of mental tests for the scientific classification of all citizens according to their ability and education, and on their basis determining the part that each may take in governing and administering the State. He would deprive the incompetent of the franchise, and exclude them from office by such means; and he claims: "The people themselves desire neither democracy nor popular sovereignty; they desire efficient, wise and just government, and they would welcome the inauguration of any practical method by which the efficient, wise or just men of the State could be discovered and installed in the office of government."

IN SOLEMN REVERENCE TO

THE MEMORY OF

Warren G. Harding

PRESIDENT OF THE UNITED STATES

WHO DIED AUGUST 2, 1923

THIS NUMBER IS DEDICATED

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EDITORIALS

THE VALUE OF NEW METHODS.

It is not the purpose here to discredit in any way the new methods of diagnosis and treatment, but a word of caution may not be amiss in accepting all that is new because it is new.

After centuries of groping about and stumbling slowly forward, physicians have begun to see real improvement in the diagnosis, prevention and cure of disease. The period of empiricism is passing and today we are beginning to scientifically measure and check up our diagnosis and treatment.

The value of the bacteriological and pathological laboratory examination is indispensable in making correct diagnosis and prognosis, yet these two agents for good sometimes do harm as well, for wrong interpretations are placed by physicians upon laboratory reports. Laboratory reports are put out for just what they are. They do not pretend at diagnosis, for it is distinctly up to the physician to correlate clinical and laboratory findings.

When a culture is sent to the laboratory for examination for diphtheria bacilli the bacteriologist simply reports his findings. If it is positive the doctor must make up his mind whether the patient has diphtheria or not. If he has a sore throat it is

quite likely that he is suffering from diphtheria but he may have scarlet fever and be a diphtheria carrier. On the other hand, if the report comes back negative, the patient may still have diphtheria and if later the patient dies of the disease and the doctor attempts to protect himself by saying that the culture was negative he is putting up a poor defense and one which would not morally exonerate him. Another patient goes to the physician with vague and indefinite symptoms and the doctor as a last resort has a Wassermann test made to find that it is positive and therefore the man must suffer from syphilis. A man falls on the street, breaks his leg and is hurried to the hospital, when, among other examinations, a Wassermann is done. Whether positive or negative has nothing to do with the diagnosis of a fractured tibia. No more may a man's symptoms be due to syphilis simply because he has a positive Wassermann. The laboratory, biological, chemical, bacteriological, pathological and X-ray departments are intended only to furnish certain facts to the physician to enable him to make a correct diagnosis.

It is natural to fly to new things, but physicians should be slow to accept as truths things which have not stood the test of experience in other hands than the discoverer's. Physicians should not get away from the clinical side of the disease and its manifestations. The more he sees, if he observes correctly, the keener will be his judgment even when aided only by the history and what he sees, feels and hears. The laboratory is the hand maiden of the physician but not his superior.

In treatment many new scientific ideas are being advanced and seemingly supported by proof but it pays to wait to see what other investigators find. Any physician who accepts ill supported methods of treatment may make money while the boom lasts but the public will not have the same confidence in him again if it proves to be a failure. One or two reputable physicians in Boston have recently passed through this experience and other physicians can no longer place any confidence in them.

WAGES AND FEES.

Some while ago there appeared in one of our daily papers a letter, the gist of which was a complaining query as to when the doctor's fees were to be reduced. The three dollar house fee and the two dollar office fee "for a few minutes work (?)" were frowned upon as being a sort of a piracy that preyed upon the misfortune and tribulations of the people.

The period was recalled of the good old days when physicians in even urban practice were not only pleased but grateful for the two dollar fee that the patient graciously handed him (if at all) any time subsequent to the treatment rendered, from two weeks to two years. The thought conveyed was that he should consider himself abundantly paid. His was a life of comparative ease. No drudgery; no being tied to the sound of bell or whistle; no fixed time for him to enter or leave shop or office; no time-clock for him.

And this, alas, is true; no time-clock for him; in the all-night vigil; in the agonized imploring mother's look; in the haste to another bedside of pain; in fatal hemorrhage; in serious accident; in the hope of life; in the despair of death—there is no time-clock for him. Inane and frivolous are these senseless quibbles of doctor's fees in the minds of those serious minded enough to realize that there can be no price upon life, that death is only a penalty and who in the seclusion of their inmost thoughts may regard life itself as a passing mirage, possessed only of certain physical temporal necessities that must be satisfied.

For at least forty-five years there had been no change in the doctor's fee; as far back as 1872—and farther—the fee for a house call was two dollars and an office call, one. "Good old days": carpenters could be hired for two dollars a day—ten hours; blacksmiths would shoe a horse for a dollar and a quarter; office help could be obtained for ten to fifteen dollars a week and it was a good man that could command eighteen.

With this short view in retrospection and not being altogether charmed with the "good old days," we leave history to history and face the present.

In recent years living commodities have increased in price in leaps and bounds; wages are keeping pace—has the doctor's fee increased in proportion to wages or cost of necessities? Is he forsaking his responsibilities to the community, to humanity or to his avocation for fields of greater financial attraction? And yet by education, by mental discipline and by varied capacities he is

equipped to produce equal or better financial returns for his efforts in other walks of life. Does he ask for special hours in which the day's duties may be performed, or for a shorter day? Hardly. If he has visions of ease, they end in visions, but he holds to his course. Physicians have never risen *en masse* to demand better working conditions, increased pay or shorter hours, though their hours are often long and the pay nothing. They are in a serious business because they are dealing with the only thing for which men really struggle —life and health—with rather a serious attitude of mind. Therefore, may we not be held excused if we exhibit small sympathy with any agency that tends to delay living necessities in transit or of communication that places health or life in jeopardy, unless, indeed, life and health are of lesser consequence; the disruption of any public utility is a serious matter and should require deep and serious *individual* thought inasmuch as idleness is never an economic asset and never constructively productive.

Idleness always means subsistence upon what we have or what others have, and if persisted in can only have one ending; it fills our theatres and throngs our streets with those in every appearance of plentitude who have nothing to do, in the contemplation of which we can only exclaim, even as it is written, "* * * they toil not, neither do they spin; yet Solomon in all his glory was not arrayed as one of these." Why single out the profession of medicine, therefore, as possessed of excessive desires when the members thereof are only seeking a "living wage"—whatever definition may attach to that term.

THE BUREAU OF LEGAL MEDICINE AND LEGISLATION.

It is a source of real satisfaction to learn of the creation of a Bureau of Legal Medicine and Legislation, authorized by vote of the several committees and adopted at the Saint Louis session of the House of Delegates of the American Medical Association.

Dr. William C. Woodward, as executive secretary, in his first annual report, outlined the scope, duties, etc., of this Bureau and also gave a summary of the more important subjects which have received conisderation thus far; namely, the National Prohibition Act, the Harrison Narcotic Law, the Veterans' Bureau and Chiropractic, the Sheppard-Towner Maternity Act, Medical Practice Acts, Federal income tax, animal experimentation, defense and indemnity in malpractice suits, and reorganiaztion of federal health activities.

Certainly the above named subjects represent the most important questions confronting the physicians of America today and any earnest, concerted effort aimed at their solution, is a step in the right direction. It is too early to foresee the degree of success to be attained by this new department, but it is reasonable to hope for immeasurably greater results from the activities of a centralized body than from those of small scattered groups of men, whose efforts are unco-ordinated and whose interest is, for the most part, transient.

In matters of legislation, it would seem the logical thing for members of Congress, as well as members of state legislatures, to seek advice from this bureau when considering matters which have to do with health or with medical licensure.

Every state society should take advantage of the help that will be so freely given by this Bureau for the solution of its problems.

MEMORIES.

By Dr. J. H. Akers.
Providence, R. I.

Chancing to meet the Editor of the Rhode Island Medical Journal a short time ago, he made the request that I write a short article for the Journal on any subject I might select other than the Volstead act, and putting the sop over by saying, "You are a man of experience, give us of it." Perhaps he feared he might run short of material to fill up space, sometime.

Sitting in my office dozing and dreaming and wondering upon what subject to write, my mind goes back thirty-eight years in the practice of medicine, doing to the best of such ability and talent as was allotted me; the curing and alleviating the sufferings of humanity. I say curing, not always so, but giving cheer and encouragement to those poor souls, nearing the border land of the unexplored world to which we must all sooner or later tread

the path of many a good friend and brother physician, for

" 'Tis but a journey,
'Tis but a step from here, and
What matters, if ships are strong and
friend be true?"

I dream of many cases, and thinking a mention of them may interest some reader, and as they come to my mind I will jot them down, not to instruct, or that they are of scientific interest, but may for the moment entertain, and cause someone to forget, while they read and smoke the good Havana, the responsibilities and worry of some troublesome case.

When starting in the practice of medicine, full of hope, but empty of pocket, I made up my mind to take anything which came to hand, and which would give me experience, if not money, and perhaps act as a stepping stone to a living practice.

Thirty-eight years ago there was not the opportunity offered the young physician to get the hospital experience as today.

I well remember my first obstetrical case. I was then in practice in a mill village in the neighboring state of Massachusetts. The patient, a good Irish woman, mother of several children. Well, I responded to the call promptly, and on arriving at the house with my kit and all the professional air I could summon, I scrubbed my hands and told the woman, a neighbor of the patient, I was ready to make an examination and asked her to make the patient ready. As she seemingly had had more experience in these cases than I, I did not give her any instructions, and I followed her into the room, and surely the patient was ready for the examination; but I did not mean an examination of the whole body, so after a little instruction, I made my examination. I thank my lucky stars that my patient was a multipara. I could make out but little of a satisfactory nature, and as she was having good and regular pains, I remarked she was doing well, and kept my courage up, and gave such encouragement to the old man as I could, and hoped the case would come out O. K.

After watching the case an hour or two I was awarded the sight of the head of the child. The perineum having been lacerated in a previous labor did not retard the babe and soon my first obstetrical case was over, with uneventful recovery. Cash in my hand—the miserable fee of five dollars—and the words of the old man, "You did mighty fine, doctor," I left the house feeling I had done a good job, but of course conceding the mother had a little something to do with the successful termination of the case.

I think many times how successful is nature if not meddled with, to take care of many of the ills of the human race. I do believe we, in many cases interfere with the processes of nature, to the, perhaps, discredit of the professional reputation, and sorrow of the patient.

The second case of any importance was the case of the "black sheep" of a prominent family, who had become addicted to the drug. He surely was a "down and out," a pitiful specimen of humanity. After some weeks of treatment, cutting the dose of the drug gradually, and finally out entirely, the patient improved and am happy to say he never took up the use of the drug again and remained a useful member of the town.

Coming to Providence in 1886, have been trying to hold the health of a part of the people of the North End up to the best standard possible.

One of my first cases coming to my mind was that of a maiden lady of middle life, living with a sister in a three-room basement tenement. She had retired, but in turning in bed she rolled to the floor. With the help of a couple of neighbors, whom I got out of bed, we finally succeeded in landing her safely in bed again, and upon examination found a fractured hip. As she refused hospital treatment, I had to do the best possible and the result was very satisfactory to me, as there was only slight lameness and shortening of the leg. This case did not fill my pockets with riches, but did assist a little in my local practice.

Soon after this case, was called about midnight to go to a house to see a young man who had been in a little friendly mixup with some member of his party, and had received a knife wound of chest. The knife had punctured the chest wall; he was very pale and with every breath blood and mucous would bubble from the wound. This case I did not expect to recover, but did so, and he has been able to work steadily, from about eighteen months from date of assault, and today a fairly strong and able man.

I well remember my first case of appendicitis, which was about thirty-four years ago. A young girl about sixteen years of age, was stricken sud-

denly with fever, and pain in the right abdomen. At this date all such cases were called inflammation of bowels, etc., and we had not heard so much about them as we do today, and wonder if they were as common. I do know at this time every physician was very much interested on account of their rarity and the writing regarding them, the causes, etc. I called in consultation our good friend, the late Dr. Mitchell. He was greatly interested and later in the day had another consultation, with several other physicians present. Will say here every physician present has now passed on to the great unknown, leaving me alone for a longer existence. After we had considered the case very carefully, decided it best to operate. This I performed in the home of the girl's parents. Was most fortunate, as the abscess was nicely walled off, and case came to a successful termination. I remember the question at that time was, What was the cause of the trouble? It was considered by some that a foreign body of some sort had passed the valvular opening into the appendix. A seed of some kind or a bit of fecal matter, perhaps. I remember seeing the operation at the hospital many times later and the hunt was always on, and when such a foreign body was found it was shown up to all present.

Today they are so frequent that cases call for no particular comment.

Soon after coming to Providence, and through the influence of the friend of all young beginners in the practice of medicine—the late Dr. J. W. Mitchell—I was appointed to the Providence Lying-in Hospital, as house physician, and later as attending physician, and this practice was of great assistance in securing a considerable large obstetric practice. I wish to say here and advise any young man starting out in medical practice to take all the cases he can get, "money or no money," for these cases are surely "family getters" and if nature is as good a friend to him as it was to me in my early work, he may well be thankful. "Watchful waiting" stood me in good stead in many a case, and advise not to be too hasty to hurry the case along by operative procedure or the use of that drug which I feel too many men use and many times to their discredit as a skillful obstetrician; at least so I judge by current report.

First cases are apt to be tedious and prolonged; later cases probably will require less of your time.

Perhaps some of you have read the story lately revived and from California, and going the round, and will repeat it here. "Our good Irish friend from Southern California was visiting his married brother in New York. 'Pat,' he said, 'why don't you come out to California? With all them three children, New York is a terrible place to live in entirely.' 'Well, welcome the will o' God! It might be worse as bad as it is. It's not only three I've got but another coming, and they tell me in California every fourth child born there is a Chinaman.' " Now I have attended many a woman with the fourth child and no such experience hereabouts.

One of my earlier cases here was a young woman with spinal and pelvic deformity. Drs. Mitchell and Terry were called in consultation and it was thought best to take her to the Lying-In Hospital for a Cæsarian operation. Dr. Mitchell, chief operator. The patient made fairly good recovery from the ether and operation, but died a few days later from pneumonia. I think this was the first case of its kind at the hospital, but have not searched the records there. This operation, so often done today and with such good results that it hardly calls for comment, some women making this elective, rather than going through the pain of the natural labor.

I wish to speak here a word of how very unsatisfactory is the nurse provided by the family in many of our obstetrical cases—the untrained nurse —some mother perhaps, who, having had several children, is usually considered amply qualified to act here. Were it a surgical case or a pneumonia or severe fever she would not be considered qualified, but here the woman is just going to have a baby—no especial care is needed and anyone can feed the patient and wash and dress the baby.

Oh! if I could only instill into the minds of every expectant mother the danger which surrounds her from the ignorant attendant nurse, I would feel a duty well done.

I know how uneasy and anxious is the physician, after he has done everything possible in the way of asepsis, to have on the fifth day, perhaps, a temperature rise to one hundred or more and the fear of a case of puerperal sepsis, or septic fever. He begins to consider if he was at fault. Perhaps he is relieved, in part at least, to find that the attendant nurse is the general housekeeper, who does all

the work of the house, laundry work, scrubs the floor, etc., and then with no preparation goes to attend the needs of the patient. Here let me cite a case of my own. A young woman, primipara, on whom I was called to attend, was taken ill. On examination, after a careful scrubbing of hands, I found a mal-position, after the cervix was partially dilated, and no progress. Ether was administered, child turned and delivered with only a fair degree of difficulty. Here I had a mother-nurse, a general housekeeper and to take care of my patient. Case did well for a few days, when there began a rise of temperature to a little over a hundred and one degrees and could only make out a mild case of septic fever. Under treatment case improved but convalescence was somewhat tardy. When making my last call patient was up and around her room. About a week later was called again to see my patient. She had a chill, pain in side and considerable fever. Here I thought I had a case of septic pleurisy to deal with. After about two weeks patient was again fairly well and about the room, and partly dressed and family thought no further professional attendance necessary. Called early the next morning, in great haste by husband, who stated he thought his wife was dead. He had been occupying the room with his wife as usual, had risen to go downstairs for his breakfast. He heard a noise as if some heavy body had fallen to the floor, rushed up stairs and found his wife on the floor by the side of the bed. She had left the bed, gone across the room to the crib, taken the babe and was returning to the bed when stricken. She had sense enough to throw the infant on the bed, where found, and she had fallen to the floor, and died from an embolus. Now all this was attributable, in my mind, to the case of sepsis after labor.

Was the fault mine? Did I make a slip, or was it due to non-care of the mother-housekeeper-nurse.

I would like to say a word of advice to all young physicians attending these cases to insist and, if possible, get a good reliable nurse, one clean of person and who will not be obliged to put her hands to other work except the care of mother and babe. If she does this well she is doing all she can do, and all she should be required to do. If you cannot do this, and want to keep the case under your own care, try and get them in some hospital, and there are hospitals where this can be done. Of course, the expense must by considered in many cases, and here you must do your best with such assistance as you or family can provide. Give the mothers the best possible chance while bringing into this world of ours the little ones, and see they have the very best care possible.

Let us go back twenty and more years and consider the general subject of medicine. Where do we see the greatest advance? Is it in the treatment of, or toward the prevention of disease? Today we hear much regarding the third or more strain, or type, in the case of pneumonia. This we did not hear of until very recent years, but outside of the serum treatment, has it helped our treatment of this disease any? I am just old enough to doubt the value and good of knowing this. I think had I this disease, I would die just as happy to know I had just the plain old lobar pneumonia, as to know I had the disease in first or fourth strain.

In general, I believe the greatest advance has been on the line of preventive medicine. Here is where the great and wonderful advance is shown of men's efforts in the conquest of the foe of mankind. Just consider the results in this line during the late war. Here our boys were all immunized against typhoid, malaria, smallpox, etc., and the results, as compared with other wars, makes a most wonderful chapter of men's conquest over disease.

It hardly can be imagined that reading such reports can but convince everybody, but I doubt not there are, or will be persons, as against the vaccination against smallpox, who will rise up against this mode of fighting disease. There are still great tasks yet ahead for our sanitarians, but who after what we have seen can doubt the ultimate results? I read recently an article of W. J. Showather regarding the malarial investigation, how the germ was discovered and so interesting was it I am going to quote a little of it. Perhaps by doing so I may invite the use of the editorial blue pencil—but I take the chance.

"It was Major Ronald Ross, a British army surgeon, who finally was able to pin the crime of spreading malaria on the Anapheline mosquito. Laveran found the tiny ell like parasite, which, swimming through the blood, attacks and breaks up the red corpuscles and causes malaria. Then Ross took up the task to find how it got there. He began to dissect the mosquito under a strong microscope. After weeks of searching, was unable

to find the malarial germ in the insect's tissues, but coming to the stomach, there he found black specks. He recognized them as the pigment of the malarial germ. On further examination he found the contents of these pigment cells to contain a multitude of thread-like bodies, and when the ruptured were poured into the body of the insect, then entering into the salivary glands and from there reached the blood of the person bitten." In his story of his work Ross exclaims: "Never in our dreams had we imagined so wonderful a tale as this."

We know the results of General William C. Gorgas in his fight to stamp out the yellow fever scourge at Havana and Panama. What more wonderful reading of the results of man's efforts in the line of preventive medicine and disease?

Now, Mr. Editor, I have wandered in my dreamings, and as I stated earlier, should not put forward anything except, perhaps, of an entertaining nature and so will end by giving you the story of the good western cowboy who sometime had heard a doctor speak of a counter irritant, and asked him what it was, he answered, "Charlie, it's something as hurts a whole lot worse than what's the matter with you, but it ain't anything like so dangerous."

Perhaps the readers of the JOURNAL will find this scribbling of mine a bit different from the countri-irritant we sometimes prescribe in our practice, and hope, not of a dangerous character.

CASE REPORTS

RUPTURE OF THE UTERUS.

BY F. J. KING.

The following report is of a case occurring at the Providence Lying-in Hospital:

Patient was admitted at 6:45 A. M., with a history of having been awakened suddenly about three o'clock by a sharp, lancinating pain in the upper left quadrant of the abdomen, so severe as to render moving impossible.

History of a Cæsarian operation following convulsions of a previous birth: She had been for four months attending the O. P. D. pre-natal clinic during the present pregnancy, and had been warned to enter the hospital as soon as she felt her first pain. At the time of her admission, the contour of the uterus was plainly visible, and was tightly drawn over the fœtus, which seemed close to the surface of the abdomen.

Pulse 76, temperature 98.2°, resp. 22. Rectal examination showed that the cervix was not "taken up," and the external os was dilated sufficiently to admit the examining finger.

Patient was very tender over region of the uterus, was apprehensive and nervous. Fetal heart 120, but irregular; two hours later could not be detected. Bleeding from the vagina was reported, and immediate operation was decided upon, diagnosis of rupture of the uterus having been established.

There was no sign of any extensive hemorrhage and no complaint of weakness or faintness.

A Cæsarian was performed, and the membranes were found beneath the peritoneum, protruding from the rupture; these were ruptured and a dead fœtus with placenta delivered.

Pituitrin and Ergonne were administered followed by good contraction. Hysterectomy was decided upon, however, which was done with removal of the drain upon the fifth day.

Recovery was uneventful; the patient sat up on the fourteenth day, and returned home upon the the seventeenth.

This case is somewhat noteworthy, because, although only two weeks from term, the patient had experienced no labor pains.

TRANSFUSION

In view of the recent reports with reference to the intraperitoneal transfusion of citrated blood, it was decided to try this method in a suitable case. The case that is being reported was admitted in extremis and a positive diagnosis of miliary tuberculosis was made before the transfusion. This route was entirely optional and was chosen merely to demonstrate to our own satisfaction that citrated blood is absorbed from the abdominal cavity, as stated.

Case: Ernest W., age 5 months, admitted to the Providence City Hospital Feb. 8, 1923. Diagnosis on admission was: Convalescent measles, acute mastoiditis and diphtheria carrier. F. H. Mother

died of tuberculosis and the father has active tuberculosis. P. H. Pt. was a full term baby, delivered normally and weighed 7 pounds at birth. Had always been well until the beginning of the present illness. P. I. Began two weeks before admission when a diagnosis of measles was made. Since that time he has been having a daily temperature and has coughed a great deal and has taken his food very poorly.

P. E. on admission: Temp. 102.4, pulse 140, respiration 40, weight 8 pounds. Pt. is a poorly developed, undernourished, acutely ill infant. Head normal, except for local. Eyes normal. Ears; the left ear canal was full of foul pus. There was considerable swelling and redness behind the ear, and this was definitely tender on manipulation. Nose, mouth, throat and pharynx were normal. Heart normal in size, action and sounds. Lungs, many medium moist rales widely and evenstrongly positive after 48 hours. Patient contin-ly distributed throughout both lungs. No areas of dullness or bronchial breathing. Abdomen normal. Skin covered with the pigmentation of a profuse rash as is seen after measles. Otherwise normal.

White blood count 21.000, blood culture sterile after 48 hours' incubation. Von Pirquet very ued to be feverish and very sick until the 27th of February, when the temperature came to normal for the first time since admission. At this time the red count was 3,600,000 and the hemoglobin (Sahli) was 40%.

Feb. 28, 1923, Pt. was given 50 cc. of citrated blood (0.25% sol.) properly matched, the transfusion. The temperature remained at 98.8 and there was no abdominal distension, hematuria or vomiting. For the next four days counts were made daily and they averaged about 4,500,000 for the red cells and the hemoglobin went up to 58%.

March 8, 1923. Mastoid was operated on and after this the child did very well for about four weeks and gained two pounds.

April 8, 1923. For the past few days the Pt. has been coughing a great deal and he is not taking food well. X-ray examination of the chest shows a widespread tuberculous process. Sputum and feces are heavily positive for tubercle bacilli.

May 4, 1923. Pt. died after a rapid loss of weight.

Necropsy report: necropsy performed 6 hours post-mortem. Head normal except for the scar of the mastoid operation. Eyes, ears, nose and mouth normal. Heart normal. Perdicardium normal. Lungs: right pleural cavity normal. Lower half of the left pleural cavity is obliterated by dense adhesions between the visceral and parietal pleura and between the visceral pleura and the diaphragm. Tracho-bronchial glands are markedly enlarged and are typically tuberculous. Both lungs contain many tubercles and the lower lobe on the left side is practically solid and contains an abscess about 2.5 cms. in diameter.

Abdominal cavity: No free fluid. Peritoneum is clean and glistening. No evidence of any inflammation at the site of abdominal puncture. No adhesions, ecchymoses or blood clots in the abdominal cavity. Liver and spleen contained many tubercles. Mesenteric glands only slightly enlarged. Otherwise normal.

Comment: This case is being reported primarily because it bears out the assertion of Siperstein* that citrated blood is readily absorbed from the abdominal cavity. Although this is certainly true, we cannot conceive of any emergency where the intraperitoneal route would have any superiority over the usual routes.

This case is also of interest because of the fact that it shows that the primary lesion in pulmonary tuberculosis in infants is often in the lower lobes and that cavitation occurs just as it does in adults.

M. Adelman, M.D.
R. C. Bates, M.D.
Providence City Hospital

*Intraperitoneal transfusion with citrated blood. Siperstein. Am. Journ. Dis. Children, Vol. 25, No. 2; Am. Journ. Dis. Children, Vol. 25, No. 3.

SOCIETIES

Washington County Medical Society.

The quarterly meeting of the Washington County Medical Society was held at the Atlantic House, Narragansett Pier, Thursday morning, July 12, 1923, at 11 o'clock.

Paper: "Relation of the Natural History of Certain Diseases to Public Health Administration," Dr. W. T. Howard.

W. A. Hillard, M. D., *Secretary*.

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ORIGINAL ARTICLES

OBSTETRIC SHOCK.*

By Albert H. Miller, M.D.
Providence, R. I.

A Case of Pure Shock.

While sailing across the Gulf of Mexico, our ship encountered a tropical thunder shower. There was a tremendous downfall of rain with vivid lightning flashes and a continuous rattle of thunder. After the storm seemed to be over, there was a sudden flash of lightning and a tremendous thunder crash. When we had collected our senses we saw that something was wrong with the captain. He had been standing opposite the door of his cabin with his shoulder resting against one of the forward halyards, talking with the mate. Now he would have fallen if the mate had not supported him. A few minutes later he had become unconscious. We carried him into his cabin and laid him on a cot with his head lowered. His color was ashy, his skin cold and moist, his eyes open, with fixed eyeballs and dilated pupils. His muscles were relaxed. The pulse and apex beat were imperceptible. The respiration was shallow, halting, and steadily failing. The condition seemed desperate. We had more than a passing interest in his recovery because we knew that he was the only one on board who was competent to navigate the ship into port.

We kept the patient's head low, gave a hypodermic of strychnine, applied ammonia on a cloth held to the nostrils and did artificial respiration. After ten minutes the respiration was re-established and soon there were signs of returning consciousness. There was a profuse perspiration which drenched his clothing. In an hour he could take nourishment and after six hours he brought the ship safely into port. Although the shoulder of his coat was burned, the captain showed no sign of physical injury.

This seemed to be a typical case of pure shock. Such cases occurred during the war among men who were knocked down but not otherwise injured by an explosion. Many of the patients recovered. Some of them died.

Wound Shock.

Our knowledge of wound shock was greatly increased through the work of the Medical Research Committee of Great Britain as reported by Dr. W. B. Cannon and his associates. Wound shock results from severe injuries: penetrating wounds of the skull, perforating wounds of hollow abdominal viscera, large open wounds of the chest, compound fractures of the extremities, or multiple wounds of the body and extremities. The signs are pallor or cyanosis, perspiration, a rapid pulse, shallow respiration, a low blood pressure, and diminished nervous sensibility. The patients suffering from wound shock are particularly susceptible to the action of anesthetics and to changes in posture. Some who have arrived at casualty clearing stations with severe wounds but in good general condition have developed the signs of shock as soon as an anesthetic was administered. Many have died when moved from the dorsal to the prone position.

Surgical Shock.

The severe traumas which are responsible for wound shock are rarely encountered during surgical operations. Nevertheless, surgical shock occurs quite frequently and sometimes accompanies trivial operations. A simple curettage or a tonsillectomy may be followed by typical signs of shock seriously complicating the recovery. In these cases the condition is mechanical, with two factors of causation: relaxation from anesthesia and posture. The abdominal veins are distensible and depend upon intra-abdominal pressure to maintain the flow of blood through them to the heart. The systemic capillaries are also distensible and with the relaxation of profound anesthesia may dilate to four times their usual capacity. When the abdominal muscles are relaxed by anesthesia and intra-abdominal pressure is reduced or lost and when the capillaries are also relaxed

*Read before the Providence Medical Association June 4th, 1923.

and distended, the influence of gravity on the return circulation becomes of prime importance. An anesthetized patient who is doing perfectly well in the dorsal position may rapidly develop signs of shock when the head of the table is raised. Quite frequently patients are plunged into shock by the post-operative use of the Fowler position. I have seen a patient who was in satisfactory condition after breast amputation, die immediately after the body was lifted to a sitting position for the application of the bandage. In these cases there is a balance between the degree of relaxation from anesthesia and the dependence on gravity for the return circulation. If this balance is disturbed, signs of shock are likely to follow.

Importance of Blood Pressure.

In determining the presence of shock and in estimating its severity, a knowledge of the blood pressure is invaluable. Routine blood pressure tests during all operations and during labor are important to accustom the observer to normal conditions and to give early warning of conditions of depression in the cases where they occur. When the systolic pressure is lowered to 80 m.m. with a pulse pressure of 20 m.m. or less and a pulse of 120, shock has developed and prompt measures must be taken if the patient's life is to be saved. If the lowered blood pressure persists for any length of time the nutrition of the heart muscle becomes so impaired that recovery is impossible and death from cardiac failure ensues within a few days. In obstetrical cases we expect to find an increase in blood pressure during the second stage of labor with a further increase during each pain, the highest point being reached during the delivery of the head. These conditions may be modified by unusual factors present in some cases as the exhaustion of a protracted labor or the presence of unusual hemorrhage. After the delivery of the child and the placenta, the blood pressure is regularly somewhat lower than normal.

Obstetric Shock.

The text books refer to shock resulting from the strain of labor in weakened patients, from accidents of parturition, or from forcible efforts to expel the placenta. Obstetric shock may also occur in strong, healthy women and in cases where the circumstances of the delivery do not explain the occurrence of the resulting depression. The labor may have been protracted and has been terminated rapidly, perhaps with the aid of instruments. There has been no excessive loss of blood. Immediately after delivery the patient is apparently in perfectly normal condition. She has been in the lithotomy position during delivery. An anesthetic has been used at intervals during the labor and to produce unconsciousness and relaxation during the delivery of the head. The degree of anesthesia has not been deep and now the patient is rapidly regaining consciousness. She is moved about in bed, placed in the dorsal position with the head on pillows, and may be turned from side to side while the soiled bed is changed. Now develops one of the most alarming complications ever met with in practice. There is extreme pallor of the skin and mucus membranes. The eyes are closed, the conjunctiva is blanched. The respiration is shallow and almost imperceptible. The pulse is weak and may be unobtainable. The blood pressure is low and may be impossible to determine. Consciousness is depressed. There may be air hunger and some expression of anxiety on the part of the patient. The skin is at first dry but later may be bathed in perspiration. The patient lies quietly on her back with entire absence of color in the face and lips, with no perceptible respiratory movement and with no radial pulse. She seems unconsious but rouses when spoken to. Muret describes this form of shock as a condition which resembles a large hemorrhage but occurring without excessive hemorrhage.

Under these circumstances our ideas of the theory of shock are not so clear as at the present moment. We must remember, however, that we have to deal with a mechanical problem with two factors — relaxation and posture. The abdominal muscles have been relaxed with an anesthetic. The uterus has been emptied rather suddenly, contributing to a further drop in the intra-abdominal pressure. The patient has been for some time in the lithotomy position. Then she has been lowered to the dorsal position, moved about in bed and her head raised on pillows. As a result the entire mass of blood is steadily accumulating in the dilated capillaries and in the abdominal veins.

To counteract this statis and insure a return of the venous blood to the heart, we must make use of the influence of gravity. Time spent in pre-

paring hypodermics and saline solution is time wasted. Leave the patient in the dorsal position with no pillow. Raise the foot of the bed 18 inches and support it on a chair. Soon the force of gravity has its effect, the venous blood begins to return to the heart and the patient shows signs of improvement. The color improves. The pulse returns. Respiration becomes deeper. The blood pressure is raised beyond the danger limit. Convalescence may be somewhat retarded by the incident but is not markedly delayed.

The occurrence of obstetric shock could probably be prevented by immediately placing the patient who had undergone a rapid or instrumental delivery in the dorsal position without a pillow and with the foot of the bed elevated. As the relaxation from anesthesia also enters into the causation of obstetric shock, the selection and administration of the anesthetic must be considered. In a remarkable paper on "Blood Pressure," read before the Rhode Island Medical Society sixteen years ago, Dr. Robert F. Noyes stated that "the safety of chloroform in labor, as far as syncope and low blood pressure is concerned, has been recognized by all obstetricians. The sphygmomanometer again has demonstrated that labor pains and obstetrical operations during labor and muscular contraction increase arterial tension which the depressing effect of chloroform does not overcome. It is also a matter of common knowledge that when the labor is ended and the uterus is no longer the seat of activity, the blood pressure is diminished and chloroform becomes less safe." He also decided that "if chloroform is the anesthetic employed in an operation, it should be abandoned and ether substituted if the sphygmomanometer indicates too low arterial tension." Increased experience leads us to the opinion that chloroform, having been proved to be an intrinsically dangerous agent, should never be used in obstetrics. Nitrous-oxide-oxgyen is the anesthetic of choice. When administered intermittently through the second stage of labor it relieves pain without diminishing the force or frequency of the contractions. In some instances, when the physical suffering has an inhibitary effect on the contractions, nitrous-oxide-oxygen analgesia by diminishing the suffering has the effect of stimulating contractions and actually shortens the time of labor. In many cases, nitrous-oxide-oxygen is a sufficient anesthetic for the actual delivery. In these cases it appears that tears of the perineum occur less frequently than in the cases where the relaxation from ether is employed. In explanation it is suggested that the loss of muscle tone accompanying relaxation may contribute to the causation of perineal tears. In caesarian section, nitrous-oxide-oxygen is chosen in order to avoid the anesthetic effect upon the child. The babies who are born under nitrous-oxide-oxygen rarely require the efforts at resuscitation so carefully prepared for when a caesarean operation is done under ether anesthesia. When ether is required to produce relaxation for delivery, we must keep in mind the dangers of excessive relaxation and administer the smallest possible amount of the anesthetic. It is in the cases in which a relaxing anesthetic has been employed that the danger of obstetric shock must be kept in mind and guarded against.

DISCUSSION OF PAPER ON "OBSTETRIC SHOCK."

Dr. Carver: Mr. President, I have been very glad to hear this very interesting paper by Dr. Miller. I am sorry that I have never been able to estimate the shock in my experience in obstetrics. There is a great deal of talk about the importance of relieving or diminishing the amount of suffering and shock. There has also been a great deal of talk about the shock of labor and to relieve that by eliminating the second stage by doing version in every case where we could get at it, with the idea of diminishing the amount of suffering and shock. Dr. Lee of Chicago, as soon as he entered the second stage of labor, applied the forceps to eliminate the second stage. The majority in the profession do not follow the teaching of Dr. Lee.

It seems to me that the amount of shock in labor has been very much overestimated. Normally, women do not show very much shock after labor, and evidence of shock disappears. It depends a great deal upon the peculiarities of the woman. A woman who is muscular and accustomed to a laborious life shows hardly any trouble, and such a woman three or four hours after delivery will go down cellar and build a fire and wash out dirty clothes with no evidence of shock.

On the other hand, a woman who is frail, with light muscular development and nervous temperament, will show more shock, but as a rule in normal cases will not show much shock and will recover from it in a very short time. I think it is being overestimated, the importance of the shock after labor. I think you get more discomfort, more disability, from ether than you do from a completed normal labor a woman may suffer, that is, to a degree. There will be a good deal of disability and discomfort for quite a while afterward.

Oxygen, I believe, is a very useful thing. It diminishes a great deal of suffering, and sometimes on the other hand, where there are rigid subjects, a nervous woman relaxes; and that holds good also with ether and chloroform, given by filtering by degrees.

I wish that the doctor could have shown us some normal labor and ordinary average normal labor and shown us something of the shock.

Dr. Partridge: I think Dr. Miller has done us a real service in showing us some real active work. Shock is a very rare thing in obstetrics. The only cases of shock which I have seen were cases of ruptured uterus and of hemorrhage. I have never felt much worried about simple forceps delivery. There is very little more danger than in any other way. There are two cases which I have seen. One was sent to the hospital after labor of seven days, practically pulseless, and died on the table. The other case was in the last service I had. She was pulseless and her heart could not be heard. Delivery was an extremely difficult one, and she died. These are the only cases I have had who died purely from shock, and I have seen a great many cases.

The treatments that Dr. Miller has spoken of are those most of us use today. We always elevate the foot of the bed.

As I said in the beginning, my experience with shock has been very slight, and I was glad Dr. Carver said the same thing. I thank Dr. Miller.

Dr. Appleton: We have all enjoyed Dr. Miller's paper very much. There is one thing about hearing Dr. Miller, and that is, we always learn something.

There is a great discrepancy in clinical shock. It is a very fine shock analysis which Dr. Miller has brought out. One reason is that Dr. Miller discovered it before we did.

One other point is for careful study tonight. In any delivery, prolonged delivery, almost routine treatment would be to elevate the foot of the bed. I would like to ask Dr. Miller if it would not be wise to raise the foot of the bed in all difficult or operable delivery.

I am prejudiced much in favor of nitrous oxide in obstetrics. One point in connection is where nitrous oxide and oxygen are available for treatment in situations immediately after delivery. I have been interested in the last year especially in the use of oxygen just as the head is born until the time when the umbilical cord is cut. I think mothers recover quickly when they get oxygen immediately after delivery. I generally put it into the mother as soon as the head comes, before it really is born. I have used it in thirty or forty cases where there have been no failures; all of that number had to be resuscitated by various methods. I think oxygen gives a very spectacular result. It is of no value after the cord is cut, as it stops the pulse. The use of oxygen to the mother is a treatment beneficial to the child, and clinically it seems to me that it has been a great benefit to the mothers.

Dr. Leonard: It seems to me that it is a very interesting paper by Dr. Miller. He has emphasized his part of the work and has attended to that thoroughly. He omitted, however, to emphasize the physician's duty of following up the delivery, of seeing that the uterus remains intact. He has not gone into our part of the business. That, I feel, is one of the most important things. I have seen the nearest cases to shock in following up the contraction of the uterus.

About the only anesthetic I remember that Dr. J. J. Wiggin used was chloroform. He would put a teaspoonful or more before the patient and go ahead with the forceps. I have not followed that, but have followed the plan of Dr. Potter of New York, who advises us to have some on a handkerchief and have the patient hold it before her face as pain comes on, and before she would come under the influence of it she would drop it and the worst would be over. On one occasion he was called out quite a distance from his home to attend a woman in confinement. They had no trained nurse and no one in attendance only those in the family. He attended the patient and she got well.

Speaking of that, there is a particular reason for my rising here. I want to speak a word for my friend, Dr. Morgan, who has been ill for three years. He had a very thorough course in preparation for his profession, and was an interne at the Rhode Island Hospital, and also at the City Hospital, before he graduated. He went abroad finally and brought back quite a set of obstetric instruments, bone forceps, bone trephine, perforator and some of the other things. Those are at his office. He is obliged to move very soon, and it would be of advantage to him and to any of the Fellows if they desire to see and obtain any of these instruments if they would call on him at his home, 74 Franklin Street. He is still doing a little work, but does not go out and does not see his patients. He has a very good operating table that he would dispose of. He has given his books to the City Library, and those on skin diseases to the Rhode Island Hospital. Some of his instruments he has given away. I think some of the specialists would like to see and perhaps obtain some of those instruments.

Dr. Noyes: There are a few points in connection with the subject that I would like to ask Dr. Miller's opinion about, and hope that he will refer to them in closing the discussion. In the first place, we notice that in all these cases that are shown by the chart, the pulse was much increased and he referred to that in connection with his talk. I would like to ask him if it is possible to have a slow pulse in connection with shock. We have seen a good many cases at the Lying-In Hospital after delivery who had bled more than normally, but yet it would seem that they had not bled enough to account for their apparent condition, pallor and weak pulse. Are they cases of shock, or hemorrhage, or a combination of both? We see a good many patients during pregnancy who run a low systolic blood pressure, of 90 or perhaps lower. Are these patients, if they come to operative delivery, any more likely to suffer from obstetric shock, or are they less likely than the cases which have moderate elevation blood pressure? The first chart of obstetric blood pressure was 60, and that was about the worst case of obstetric shock he showed. It seems to me that we have seen a number of cases at the hospital of moderate shock following delivery in the cases, as Dr. Partridge said. Then the cases of the charts that Dr. Miller showed; I wondered if in any of those cases there was any question of more than the usual amount of bleeding. I presume that there was not, or he would have referred to it. And in the treatment, I wondered if there was a question of less intra-abdominal pressure leading to the change in position which Dr. Miller mentioned; if he used a tight binder or sand bags on abdomen, would it not be an additional advantage?

Dr. Jones: I think that we are indebted to Dr. Miller for bringing out an explanation of a condition which probably we have all recognized clinically but which we have not gone into and really worked out scientifically, as Dr. Miller has. We see this condition in surgical work, which I think is very similar to the shock he described in obstetric work. One woman, on whom I had done an hysterectomy, suffered an excessive loss of blood and four hours afterward went into shock, and her picture was just such as Dr. Miller has described in some of his observations. I used saline and had the foot of the bed elevated, and she immediately began to come back. I think that in her case the loss of blood which occurred was perhaps more than in an ordinary patient, although not a great loss of blood. I think that element comes in with your obstetric work. There are two features: loss of blood and the position of the patient following delivery or surgical operation. I think that, as Dr. Miller has said, the blood being in the extremities, in the legs, in the abdominal chamber, is the big point. As soon as that is rectified, I think stimulants are much less value than we have thought in the past.

Dr. Fulton: I would like to ask Dr. Miller just a little about the effect of adrenalin. As I recall one of the cases, he administered adrenalin along with saline, with rapid drop. There has been a great deal written lately about the intracardiac injection in cardiac standstill, and where the heart has been caused to begin to beat again after it has completely stopped. How much Dr. Miller has used adrenalin in these cases, and how often it can be repeated. It seems as though intracardiac injection is of value in some of these cases.

Dr. Chase: There is one thing in the treatment of shock that has not been stressed at all. That is heat. About any time you walk into a hos-

pital you see cases where a patient is lying about in wet clothes. In the army, American hospitals were equipped with shock cabinets, which were cabinets superheated. Patients were placed in them and kept very warm indeed. Undoubtedly, the three main elements to be considered are posture, fluids and heat. I think heat is undoubtedly not stressed enough.

Dr. Miller: In regard to the continued use of adrenalin that Dr. Fulton spoke of. I do not think that in any case I have used adrenalin in more than two doses of more than 1/10 of a grain at an interval of ten to twenty minutes. In those cases it has always had a prompt result, and shock has passed away very quickly, and from what I have seen of adrenalin that is the experience in general. In one case in which a child had been dead for a period of something like eight minutes, artificial respiration was done, and a saline solution introduced into a vein. To this saline solution was added adrenalin by puncturing with a hypodermic needle. By repeated doses of adrenalin the child was kept breathing and alive for eight or ten hours, but the child could not be kept alive permanently. I think it would be very interesting to try repeated doses of adrenalin; but as far as two doses go, it has no lasting effects in any of the cases I have seen.

In regard to the patients with a low blood pressure and a slow pulse. We run across that condition very often among the surgical cases, particularly among old people. We find a good many old people who approach operation with a low blood pressure and slow pulse, and as operation goes on their pulse is liable to become slower and the blood pressure perhaps a little lower than it has been at the start. They are not in a condition of shock and not in a dangerous condition. In fact, if you gave them an ordinary hypodermic of strychnine you would get an increase of blood pressure and in heart rate. They are not in a condition of shock according to the definition. A patient who had a systolic pressure of 80 and a diastolic pressure of 60 and a pulse of under 120 would not be in a condition of shock. The patient might be in a depressed condition but it could not be the condition which we call shock, and which would be fatal if condition were allowed to go on for twenty minutes or more.

About the amount of bleeding in the cases I had on the screen, there was not one of excessive bleeding in any of those cases. They corresponded very closely to that definition I mentioned before as being the best description of this condition I have ever seen. It fits these cases perfectly. "A condition which resembles an excessive hemorrhage, but no excessive hemorrhage." None of these cases had excessive bleeding. I do not expect to see many more of them. It just happened that I ran across them in my practice of three years. It is a very unusual thing.

I think it would be a good idea to put a tight bandage around the abdomen, although it has been found in practice and proved very conclusively that the old idea of bandaging extremities for shock is of no use.

Strychnine increases blood pressure very quickly. In shock it does not do anything at all. Blood pressure is not elevated by strychnine and is not elevated by saline solution intravenously. In a case of shock, the more saline you put in, the worse the patient is off. What effect does strychnine have? I do not know exactly, but in patients who have a combination of low blood pressure and slow pulse it quickens the pulse and increases the blood pressure. In cases of rapid pulse and low blood pressure strychnine does not have any effect in the blood pressure. It is a very interesting thing to have a patient who has a low blood pressure with slow pulse. In those cases we get a pulse in the fifties quite often with low blood pressure which would frighten us if we did not know that the pulse is slow. Those cases do not correspond with the definition of shock. Those patients go through and recover without any trouble. That they have slow pulse does not seem to affect them at all.

Vitamines Not A Cure-All.

The present popular tendency to extol vitamines as a cure-all may be drawing to a close. The U. S. Public Health Service reports that efforts during the year to discover the unidentified food substance whose absence from the diet causes pellagra have excluded two of the three known vitamines. The search for the missing element is being steadily narrowed.

CHINA'S CONTRIBUTIONS TO MEDICINE.*

By Dr. E. H. Hume.
Dean of the College of Medicine of Yale in China.

Source of Information.

Knowledge of Chinese medicine is secured from folk lore, every citizen having a considerable fund of information about the principles of medicine as understood in China: from the standard medical books, which number legion; from the general histories; from a study of the Chinese Ideographs, many of which illustrate the transition from an era of magic to a period of standardized practice; and from the observations of travellers.

Varieties of Medical Practice. While the common opinion is that Chinese medicine consists of charms, incantations, magic, manipulations, disfiguring plasters, etc., the facts are that there is both a quack practice and a rational practice, the picture resembling that of Europe in the Sixteenth Century.

The Development of Medical Practice. Chinese medical records start from a period said to commence at 2800 B. C., when the great Emperor Shen Nung devoted a portion of each day to the tasting of herbs. He was followed by the Emperor Huang Ti, who is said to be the author of the "Canon of Internal Medicine." Even though this work was not composed before 1000 B. C., the fact remains that China has had a systematic medical literature for at least three thousand years. Unfortunately the picture has frequently been clouded by mysticism and empiricism. There developed very early a dual philosophy of the universe, it being taught that on the one hand was the positive influence, represented by heaven, day, heat, etc., and on the other, the negative, by earth, night, cold, etc.

Positive Contributions to Medicine. Two things stand out as worthy contributions. The first is systematic physical diagnosis. From the earliest days the trained physician in China has been taught four steps—"Look—Listen—Ask—Examine." When these four words were explained, they proved to be very definite suggestions as to the method of examining patients. Under the word "examine" there has come down to us a most elaborate study of the taking of the pulse. Here again theorizing caused error, for it was taught that the heart, the liver, and the kidney were joined by direct channels to the left wrist, while other organs were similarly connected with the right wrist. Taking of the pulse, therefore, meant getting direct evidence from the organs supposed to have such connections.

The other contribution was in the realm of botany. Three hundred and eighteen listed herbs are described in the materia medica, and there is no question as to the efficacy of many of these. The Chinese have potent cathartics, diuretics, etc., whose value will become known to us in increasing measure by the methods of scientific investigation.

Knowledge of Surgery and Physiology. In the "Canon of Medicine," written not later than 1000 B. C., we find the following: "All the blood is under the jurisdiction of the heart. The twelve blood vessels are deeply hidden between the muscles and cannot be seen. Only those on the outer ankles are visible, because there is nothing to cover it in these places. All other vessels that are on the surface of the body are veins. The harmful effects of wind and rain enter the system first through the skin. It is there conveyed to the capillaries. When these are full it goes to the veins, and these in turn empty into the arteries. The blood current flows continuously in a circle and never stops." This description of the circulation of the blood antedates Harvey by about two thousand years.

About two hundred years after the time of Christ, there lived Hun To, the most famous surgeon of China. He administered to his patients an effervescing powder in wine, and produced complete unconsciousness. This enabled him to perform many operations, including venesection, excision of the spleen, etc. He offered to cure the headaches of his royal patron, King Tso, by opening the skull under hashish. He was arrested for this impudence, and ordered to be killed. Just before his death he offered all his manuscripts to the jail keeper, who dared not receive them, whereupon Hun To burned his papers, and only a few leaves were recovered from the ashes, the description of castration being one of the operations described in the recovered papers.

Modern Opportunities. The era of modern medicine began early in the nineteenth century, when an English physician, Dr. Colledge, went to

*Read before the Providence Medical Association May 7, 1923.

South China with the East India Company, and early established a reputation for his medical skill and personal benevolence. In 1835 he was joined by Peter Parker, the first medical missionary to China. On the foundation laid by these men there has gradually been built up increasing confidence in the methods of western medicine, until today there are dotted over China well over four hundred hospitals, the majority of these being under medical missionaries. There are in addition a few centers where scientific medical education is being given, the most important being as follows:

1. Peking Union Medical College, owned and operated by the Rockefeller Foundation. Here are to be found the most complete plant and the largest staff in Asia.

2. The Medical School of St. John's University at Shanghai. To this institution a certain amount of support is given by the graduates of the University of Pennsylvania.

3. The Medical School of Hongkong University. This school is operated according to British standards, and is rapidly developing a very strong staff, and building up modern equipment.

4. The Hunan-Yale College of Medicine at Changsha. Here there exists a unique cooperation between representative educators of the Province of Hunan and the staff of the College of Yale in China, each party contributing funds towards buildings and upkeep, and the local management being under a joint board of Chinese and Westerners.

5. The Medical School of Shantung Christian University at Tsinan. Whereas the first four schools teach entirely in English, the instruction in this school is given in Chinese, with the provision that the students must learn to use English books and journals, so as to be able to use medical literature after graduation.

In addition to these five schools, there are several government schools, which are increasing in strength each year, although they have not yet placed themselves squarely upon modern university standards of medical teaching.

The opportunity for teaching, for practice, for research into unusual diseases, makes the field in China particularly alluring today.

Who's Efficient Now?

Uncle Sam may owe arsphenamine (salvarsan) to Germany, but he has improved it a lot since he took over its manufacture some years ago. Today, says the U. S. Public Health Service, it and its fellows pass tests that are twice as rigid, which means that the drugs themselves are twice as safe as they ever were before.

Mosquito Control.

Co-operative anti-mosquito work in 45 towns situated in 10 Southern states has cut down their malaria rate by 75 to 90 per cent., says the U. S. Public Health Service. It saved its cost several times (in one town eight times) in doctor's bills, medicine bills and lost wages, all of which are items that are positive and ascertainable.

Don't Infect Mosquitoes.

Commenting on printed reports on mosquito control in such diverse countries as Spain and the Dutch East Indies, the U. S. Public Health Service calls attention to the fact that the government authorities who are trying to free a certain region in Spain of malaria refuse to allow sufferers from that disease to remain in the region over night lest they infect the malaria-bearing mosquitoes, which feed only at night. Few white people live in the region; and most of the sufferers come from considerable distances and seem to have contracted malaria while working there in previous years. Their blood is examined and they are provided with sufficient quinine to last them for two weeks and are told to go home at once and to report back at the end of that period for another two weeks' supply.

The theory is, of course, that if mosquitoes cannot find a malaria patient to bite they cannot acquire malaria germs and therefore cannot pass them on to well persons. In other words, if men do not infect mosquitoes, mosquitoes will not infect men.

Incidentally, the Service notes that the American minnows, Gambusia affinis, are being imported into Spain and Italy to help in mosquito eradication.

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RHODE ISLAND MEDICAL SOCIETY

Meets the first Thursday in September, December, March and June

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Section on Medicine—4th Tuesday in each month, Dr. Charles A. McDonald, Chairman; Dr. C. W. Skelton, Secretary and Treasurer.

R. I. Ophthalmological and Otological Society—2d Thursday—October, December, February, April and Annual at call of President Dr. H. E. Blanchard, President; Dr. Jeffrey J. Walsh, Secretary-Treasurer.

The R. I. Medico-Legal Society—Last Thursday—January, April, June and October. James B. Littlefield, Esq., President; Dr. Jacob S. Kelley, Secretary-Treasurer.

EDITORIALS

THE USE OF THE OPHTHALMOSCOPE.

When the great physicist von Helmholtz invented the ophthalmoscope, he placed in the hands of the physician an instrument which was to prove no less valuable than the stethoscope of Laennec; for as the latter amplified both the range and the precision of the ear, so the former in a very literal sense made the darkness visible. From a craft of mere empiricism and sagacity, confined for the most part to superficial observations, ophthalmology became after the introduction of the ophthalmoscope, a study of deeper affinities pursued in a truly scientific spirit. One can well appreciate the feeling of exaltation with which Albrecht von Graefe saw, for the first time in his notable career, the retina of a living patient. And what emotions must have stirred within him when in 1859 he first made the brilliant diagnosis of embolism of the retinal artery as being the pathological condition in a case of sudden blindness, and then went on to dispel contemporary ignorance by showing that most cases of blindness and impaired vision associated with cerebral disorders were owing to optic neuritis rather than to paralysis of the optic nerve as had been the common belief before his time!

In Holland that gifted polylinguist Donders, while waiting for one of Helmholtz's ophthalmoscopes, turned his impatience to good use by contriving one for himself, in which a silvered mirror with central perforation was substituted for the superimposed glass plates of the Berlin master. A little later in Leeds, the youthful Dr. Clifford Allbutt, then as now *facile princeps* in clinical medicine, was busy with the ophthalmoscope and was collecting the material for his hand-book of opthalmology published in 1871. Hughlings Jackson was at work in London with Jonathan Hutchinson as associate and William Gowers as disciple, doing, all of them, pioneer work of the first quality. Hughlings Jackson used to remark that he considered it the most fortunate thing in his whole medical career to have begun the studies of his profession in an eye hospital; and he never wearied of inculcating in the minds of his younger colleagues the important services which ophthalmology can render to general medicine. In America, Weir Mitchell and many others who witnessed the birth of the ophthalmoscope paid their tribute of praise to the great services it was rendering the physician. In our own day, to praise the ophthalmoscope were to indulge in the painting of lilies.

And yet we can all bear witness to the curious paradox that whereas every physician uses his stethoscope daily and would feel lost without it, few physicians own and employ the ophthalmoscope. But, if one stops seriously to reflect upon it, what a great pity this is, for where, except in the eye, can one view directly a nerve, an artery, a vein and a nerve expansion? Inside the eye—a veritable microcosm contained within the macrocosm of the body, Nature presents for us, if only we will but look and see, the fair picture of health and the tragic delineations of disease. The fury of local storms we may study as well as the wreckage borne in upon the tides of more general disturbances, for the eye has perhaps more pathological sympathy than any other organ of the body. If you would know whether a persistent headache is meningeal, perhaps syphilitic in origin, examine the choroid for evidence of past or present inflammation, because the pia mater is the choroid of the brain. If some obscure cerebral disturbance is caused by a tumor, the ophthalmoscope may disclose an optic neuritis and decide the issue as between functional and organic mischief. Looking through this small window of a pupil one can see the local tissue changes which are part of more widely scattered degradations elsewhere throughout the body; thus do diabetes and nephritis and lead give evidence of their presence. The arteries too are here visible in their health as well as in their decay, giving timely warning of approaching, but possibly preventable disaster. When Wassermanns are negative and symptoms perplexing, the presence of optic therapy may clarify for us the real significance of certain "rheumatic" pains in the arms or legs. And so we might go on enumerating many more of the helps which the ophthalmoscope is prodigal in giving to general medicine. Nothing we have said is news to any physician, and yet there is a very notable neglect of ophthalmoscopy. It is strange, to say the least of it, that we who are so anxious for exact knowledge based upon the data of observation, should cultivate our senses of touch and hearing by the use of percussion, palpation and auscultation, while we neglect or almost neglect, to extend and refine our knowledge by the ophthalmoscopic use of our eyes.

RECORDS.

The first rule that is learned by the student of laboratory and research medicine is this:—"Promptly record all observations that you make." There are those among the profession who are fortunate enough to possess brains of the card catalogue variety who can with ease and a great degree of accuracy recall the details of observations made days, weeks and months before. But even among men of such unusual faculties the written record is of value—for at best attempts to recall facts by the memory are bound to result in minor and at times major inaccuracies and in a subtle smoothing off the corners of truth which makes them fit together to conform easily to any preconceived notion or "hunch" that happens to dominate the mind of the observer. This destroys the value of the observation.

The JOURNAL is closely in touch with the "average practitioner" in Rhode Island and accords him a great degree of whole-hearted respect. The feeling, however, cannot be escaped that this man in the rush of his daily work is failing accurately

to record and preserve observations which might be made of the greatest value. Sir James MacKenzie clearly pointed out the opportunity of the general practitioner in making great advances in medical knowledge by carefully made, *and carefully recorded,* clinical studies of patients over long periods of time. If a man can afford an expensive make of automobile or the services of a chauffeur for his daily work, he at least should be able to hire a secretary whose chief duty it is to prepare, file and catalogue his records so that the clinical data which he collects and on which his experience as a practitioner is based, can be preserved and made available to the profession and thus valuable to the public.

WHO PROFITS BY STRIKES?

Though it is somewhat outside the pale of common usage to indulge in any discussion not within the realm of medical association, still we must always bear in mind that we were men and community factors before we became physicians, and we cannot, as physicians or citizens, overlook or ignore the activities of any public utility as having no bearing upon the well-being of a community or as not having a distinct association with our professional usefulness.

The telephone strike is fortunately at an end; whatever politics may have influenced its inception, the results have, as in most strikes, been disastrous.

There is hardly a hamlet in the country that in these days may claim isolation; the automobile and the telephone are two of the principal agencies that have disturbed this one-time seclusion. No movement of any pretension can take place therefore, without finding a general echo; every trade and every profession must be affected in some degree; the profession of the practice of medicine is part of the general scheme and should shake itself out of its undesirable aloofness and accept the responsibilities that the rapid strides of recent years have thrown upon it, by assuming a definite stand upon civic affairs that have bearing upon the health of our people, whether this disturbance be one of communication, of transportation of food, coal or any other great necessity.

Arden, Del., Jan. 31, 1923.

EDITOR "THE RHODE ISLAND MEDICAL JOURNAL,"

Dear Doctor: Enclosed is an article which I would like to ask you to publish, if the space of the JOURNAL permits. I am daughter of the late Dr. L. F. C. Garvin, for many years member of your Society, and my mother was also a practicing physician. While not a physician myself, I had instruction from both along hygienic lines and I would like to be of use in calling attention to what seem very important points. While my work keeps me here most of the year, my home is in Rhode Island and I have much interest in progress there.

Yours very sincerely

FLORENCE GARVIN

REST AND FAST.

BY FLORENCE GARVIN

The first half of this title is not complete without the second half. The muscular system is divided into voluntary and involuntary. If the voluntary muscles of the limbs and back require rest, the involuntary muscles of the digestive tract also require rest. Fasting in the past has been mostly identified with religious systems, but the religious organizations spread among masses of people and coincident with the powers of government (as, for example, the Roman or Greek Catholic) have rules the object of which was essentially the health of the people. Whether it was necessary in the original preachments to an ignorant people to give superstitious reasons for health rules is not a question important in the present day, but it is important that, in this day of general education, enlightenment as to health be an essential part of public education.

Illness of any description is a sign that the eliminative process necessary to health is not taking place. It is logical therefore that to avoid food is a safe course. So eminent a physician as Doctor Oliver Wendell Holmes said that when tired or faint but not hungry a mild stimulant is safer than food. It is not to be supposed that he was actually recommending stimulants, but of the two alternate courses, the uninstructed person chooses food, and after a hearty evening meal in a fatigued condition, rises the next morning with a cold or

headache and does not know the reason why. Catarrhal conditions affecting eyes, ears, mouth and nose are so chronic with the majority of adults that it takes only one too many meals under unfavorable circumstances to precipitate an acute attack. Fasting tends to loosen the catarrhal condition, benefiting all the outlets of the head. A little experience in this line tends toward conversion.

Another condition that is chronic with the majority of people, whether fat or thin, is a sagging of the muscles of the soft digestive organs, stomach and intestines. Compare the disrobed figure of the average American with the classic Greek statues of Venus or Apollo. Note the tone of the abdominal muscles in the classic statues. No trusses needed on them. The digestive muscles in many people are in an overworked degeneracy comparable with the workworn arm muscles of the washerwoman or manual laborer who has too many hours of labor for her or his good. There is a tenseness combined with a depression in workworn muscles. They have operated too often, and, for relief, there is no substitute for rest and temporary inaction. For over-worked digestive muscles, the advice to rest is often unwelcome to their owner and an increase of quiet and sleep is usually necessary to insure a fast.

The history of religious government is enlightening in the study of hygiene. The insistence upon quiet on the Sabbath, the rule of Puritan government, was a safe rule for nervous health. The insistence upon bathing in a sacred pool in the early summer among peoples, who, previous to the date of modern plumbing, "sewed up for the winter," was preventive of epidemics. A hibernating people was subject to plagues. The reduction of food during Lent, the six weeks of the transition from winter to summer, is of internal housecleaning value and is similar in virtue to the cleaning of the house, which the housewife considers her duty in the spring.

It is not claimed that any form of religious government has said the last word upon hygiene, but their influence has been widespread and authoritative with the people and scientific hygiene needs to look into the history of church rules that have met the needs of millions in a rough way and find out their hygienic value. While the authority of the priest or spiritual adviser has for many centuries been gradually declining with the increase of popular education, the authority of the medical profession has been gradually increasing over the same centuries and the confidence of the people brings with it a responsibility for the life and health of the people, and to establish the habits of a nation upon a sound basis is a task which calls for the best and most dignified efforts of the profession. What could be accomplished in this line in a small nation was demonstrated by the ancient Greeks.

It ought not to be satisfactory to the profession to be merely called in when sickness has frightened the individual or the family. A whole survey of the health of the entire nation and their habits as determining their health is none too large an undertaking for the profession, and, unless it is undertaken, there will be no consistent American character, divided as people are religiously into denominations and attracted as they are by varied businesses and sports, but an edict as to the health of the nation should take precedence of any other influence, provided the edict is not arbitrary, but based on a survey of the whole American people, making allowance for the liberty of conscience allowed in Christianity and the inquiring mind produced by popular education. The future of the American people, both as a perfected type and also as an example to other nations, is a matter for serious study.

SOCIETIES

Providence Medical Association.

The regular monthly meeting of the Providence Medical Association was called to order by the President, Dr. William B. Cutts, at 9:10 P. M., May 7, 1923. The records of the last meeting were read and approved.

The Standing Committee having approved the application of Dr. Frank I. Matteo, the Secretary was instructed to cast one ballot for his election.

The President announced the meeting of the N. E. Hospital Association to be held on May 16 and 17. Doctors J. H. Davenport, W. R. White and A. A. Barrows were appointed by the President to present resolutions on the death of Dr. Harold Metcalf.

The address of the evening was given by Dr. E. H. Hume, Dean of the College of Medicine of Yale in China, on "Chinese Medicine, Ancient and Modern." In an interesting manner he told of the ancient medicine of China, which is older than the religions there, and closely associated with the life and folk-lore of the people, it lays great stress on its involved methods of physical diagnosis, has a large materia medica and some distinctive physiology, but its surgery is of little value. It is hard to make a start in modern medicine as it conflicts with the thoughts and customs of the Chinese. Dr. Hume then told of the medical schools established by the white races, the finest being that of the Rockefeller Foundation at Peking, $6,000,000 buildings. The Yale school is nine hundred miles up the Yangtee River in a province closed to outsiders until about twenty years ago. Dr. Hume gave an account of the founding and present condition and work of the school, and then showed interesting moving pictures of the trip up the river and scenes about the school. Numerous questions were then answered by the speaker. The meeting extended a rising vote of thanks to Dr. Hume.

Meeting adjourned at 10:30 P. M. Attendance, 84 members, 2 guests. Collation was served.

Respectfully submitted

PETER PINEO CHASE, *Secretary*

MEMORIAL
to
HAROLD METCALF, M.D.

In the Jane Brown Memorial Hospital, on March 3rd of the current year, occurred the death of a physician, a member of this Association since 1888, whose name must be added to the list of those who have been held in the highest esteem and respect by our membership and by a very large circle of friends and patrons.

Dr. Harold Metcalf was born in Providence, November 25, 1860, the son of Levi and Georgianna Metcalf. He entered Brown University from the Classical High School and was graduated with the degree of A.B. in 1884. His graduation in medicine was in 1887 from the Harvard Medical School.

After one year's practice in Providence with office on North Main Street, he removed to Wickford, R. I., and was actively and successfully engaged in the general practice of his profession nearly to the time of his decease. During his first year in Wickford he married Miss Mary A. Barney of Middletown, R. I., by whom he is survived and also by a daughter, Miss Mary, and three sons, George T., John T., and Paul B.

His health was seriously impaired during his last four years of life, but, like very many of our profession, he worked on and on while endurance remained. He was Medical Examiner for North Kingston and Exeter for thirty-three years and took an active part in educational and other public interests of Wickford and surrounding communities, for his practice extended in all directions. He was a constant attendant on our meetings and those of other medical societies, and a member of the American Medical Association.

A physician who knew him well has this to say of him: "I feel that mention should be made of Dr. Metcalf's marked ability as a diagnostician and am confident that in spite of the restrictions of country life and practice he was one of the very best diagnosticians in the state."

Thus in how few words may be outlined a human life, but with Dr. Metcalf how inadequately may words express his life's fullness, its success, its value to his fellow men. Doubtless to most of our younger members Dr. Metcalf was hardly known but by those who knew him best he surely was regarded as one in the first rank of his profession. He came among us in a quiet way, always genial and cheery, seeking no brilliant fame or distinction such as the world sometimes bestows, but true in manhood, of high ideals, loyal, honorable, faithful and unselfish in service, surely he had grown to be both honored and beloved.

In his domestic and parental relations, Dr. Metcalf was most happy. It was the writer's privilege some years ago, for a single evening, night and morning, to be a guest in his home, and the impression then received has since been cherished as a memory both pleasant and inspiring of real home life and happiness.

As we now review the career of Dr. Metcalf, realizing his fine character, his years of patient, generous toil, the splendid service he rendered, may we not use the thoughts once expressed by

another: "He has achieved success who has lived well, laughed often and loved much; who has gained the respect of intelligent men and the love of little children; who has filled his niche and accomplished his task; who has left the world better than he found it. whether by an improved poppy, a perfect poem or a rescued soul; who has never lacked appreciation of earth's beauty or failed to express it; who has always looked for the best in others and given the best he had; whose life was an inspiration; whose memory a benediction."

Dr. James H. Davenport
Dr. William R. White
Dr. Albert A. Barrows
Committee.

Providence Medical Association, June 7, 1923.

THE STANDARDIZATION OF BIOLOGICAL STAINS.

On March 2nd at the Chemists Club in New York City, there was held a meeting of the Executive Committee of the Commission on Standardization of Biological Stains. The members of this committee are: H. J. Conn, Geneva; F. B. Mallory, Boston; L. W. Sharp, Ithaca, N. Y.; J. A. Ambler, Washington, D. C.; and S. I. Kornhauser, Louisville, Ky. The meeting was also attended . . . . by J. P. Garvan and W. F. Keohan to represent the Chemical Foundation. The meeting is a matter of interest to everyone in the medical profession.

All physicians realize the need of dyes for staining specimens in the laboratory diagnosis and investigation of disease. It is not perhaps so generally realized that the dyes used for this purpose, in order to give constant results, must be of very precise chemical composition; and yet it is a very difficult matter for either the chemist or the biologist to control their composition. Before the war all stains were imported from a single German firm. This firm did not manufacture stains, but bought textile dyes in batches of considerable size, and after some preliminary testing bottled them and sold them under its own name to the biological laboratories of the world.

When the war broke out the American laboratory was deprived of this foreign source of stains. After the pre-war stocks already on hand had given out, much difficulty was experienced in getting stains of the quality necessary. The Society of American Bacteriologists began an investigation of American-made dyes that were being sold as biological stains. The results of this investigation were so promising that it proved possible to secure the assistance of the National Research Council through whose agency a co-operative investigation was arranged among the members of several national societies. Recently the work has been organized under a special commission independent of the Research Council but still representing the different national societies that were co-operating in the earlier work.

At the executive committee meeting of this commission just held, the very encouraging results of the work were reported. It was shown that already the stains available in America are in practically all cases as good and sometimes better than the best of the pre-war stains. The most important fact brought out at this meeting was that while the pre-war stains were standardized only in an empirical way, by buying large batches without knowing the exact composition of the dye, they must now be standardized on the basis of pure chemicals.

The reason for this is because it is proving that in some cases the impurities present in the pre-war stains were very necessary. Sometimes these impurities were other dyes and sometimes supposedly inert materials like dextrin. In all cases the task plainly before the commission is to find out what the impurity is which was responsible for the good staining qualities of the impure product. Then in the future the users of stains must demand that these impurities be present, not as impurities, but as intentionally added ingredients. When this has been done and the products are labeled and used accordingly, the American stains will become standardized in a true sense of the term.

Very shortly the commission will begin issuing certification of definite batches of stain that it has found satisfactory. These stains will be put on the market under a special label bearing the name of the commission. Users of stains must be on the lookout for products bearing this label.

MISCELLANEOUS

GROUP SUBSCRIPTIONS TO HYGEIA.

At a meeting of the Genesee County Medical Society, Michigan, it was voted to send *Hygeia* to each school in the county. The society forwarded a check for $166 to cover these subscriptions. In addition to the initial subscription of more than 1,200 sent by the Allegheny County Medical Society, a later order for 446 subscriptions was received. These include the heads of charitable organizations, public officials, presidents of women's clubs, educators, clergymen and public libraries. The society offers to increase this amount still further, provided the introductory subscription is left open. Other local societies have also sent in group subscriptions to *Hygeia,* among them, Pierce County, Washington; Cascade County, Montana; Genessee County, Michigan; Lake County, Indiana; Fergus County, Indiana; Portage County, Ohio, and Douglas County, Wisconsin. A number of societies have reported that the matter will be considered at the next meeting.

—*Jour. A. M. A.*

TYPHOID FEVER IN 1922.

Our annual summary of typhoid death rates in the large cities of the United States, which appeared last week, shows a continuance of the typhoid decline which has been so striking a factor of the epidemiology of this disease for the last twelve years. The slight interruption to the steady downward curve which occurred in 1921 was more than overcome in 1922, and the truly astonishing rate of 3.15 per hundred thousand has been reached. This is a little less than one sixth of the rate (19.59) for the large cities of this country in 1910. Three cities with an aggregate population of 473,975 were able to report a perfectly clean slate, not a single death from typhoid having occurred within their borders during the calendar year 1922. The main causes of indigenous urban typhoid in the United States at present seem to be contact with typhoid cases and typhoid carriers—a steadily diminishing hazard, occasional cases from a contaminated shellfish, and from bathing in polluted water, and perhaps in some cities, from the improper disposal of excreta. Relatively few cases appear to be caused by polluted drinking-water, by milk supply, or, in the Northern cities, by inadequate sewerage. A considerable, if indeterminate, number of the typhoid deaths that occur in the large cities do not originate in the city itself, but are due either to infection contracted outside or to cases brought in for treatment. It is evident that not much further reduction in city typhoid rates can be expected until a diminution in rural typhoid can be brought about. In 1920, the rural death rate for typhoid, as reported by the Bureau of the Census, was nearly double the rate in the urban population. This condition is more marked in some parts of the country than in others. It is also true that in states with a large negro population typhoid rates are higher among the negroes than among the whites, for the same reasons probably that determine excess of typhoid in rural districts. The most encouraging feature of the whole typhoid situation is that our large American cities are no longer distributing centers of typhoid, black plague spots radiating corruption into the surrounding countryside. The two great agencies of typhoid dissemination, polluted water supplies and raw milk, are largely eliminated, and while cities of from 10,000 to 100,000 population have unquestionably much progress to make, especially in control of the milk supply, the condition in the larger cities for the most part may now be regarded with pride instead of being pointed to with obloquy as awful examples.—*Jour. A. M. A.*

Why Babies Die.

More than 100,000 of the 250,000 children less than one year old who die every year in the United States die from causes connected with their birth, says the U. S. Public Health Service. The need, it adds, for further study and investigation of these causes is urgent.

Each Dollar Brings Five More.

The U. S. Public Health Service reports that the expenditure of $50,000 for rural hygiene work on the co-operative plan in the last fiscal year led to the appropriation of five times as much by states and counties and of a good deal more by private individuals and corporations.

INTRAVENOUS INJECTIONS OF GLUCOSE IN TOXEMIA OF PREGNANCY.

Intravenous injections of glucose for pernicious vomiting of pregnancy, as advocated by Paul Titus and M. H. Givens, Pittsburgh *(Journal A. M. A.)*, in a previous paper, gave results sufficiently uniform and successful to warrant applying the same treatment to other toxemias of pregnancy, eclampsia in particular. Successful results have been obtained by the use of carbohydrates in treatment of vomiting of pregnancy in forty-six cases now reported in addition to the series of seventy-six previously reported. Therapeutic abortion was performed twice; in one of these cases the patient died from acute yellow atrophy of the liver. Immediate clinical improvement in individual patients, as well as a general lowering of the mortality rate in eclampsia, has been noted as a result of the intravenous administration of glucose for this condition. Chorea gravidarum, preeclamptic toxemia, and fulminating toxemia with ablatio placentae have likewise shown favorable results from this treatment. The usual necropsy findings in the liver of patients that have died of any toxemia of pregnancy are distinctly altered if the patient was given an intravenous injection of glucose solution before death. Those portions of the liver lobules which are ordinarily necrotic are thereby restored to a marked degree; and in most instances, a diagnosis of eclampsia or pernicious vomiting of pregnancy, as the case might be, could not be made from an examination of the liver sections alone. The regeneration of the liver cells after injection of glucose, which can be demonstrated pathologically in the fatal cases, at least partially restores the normal functions of the liver, especially in respect to its action as the detoxicating organ of the body. Clinical improvement is usually noticeable within a short time after the injection. From 50 to 75 gm. of chemically pure glucose dissolved in from 250 to 500 c.c. of water may be injected slowly without danger of unfavorable reaction on the part of the patient. Single doses repeated as required are preferable to a continuous flow of solution into the vein. It is thought that the rate of absorption and storage of the injected sugar is an index of the condition of the liver. Glycemia curves plotted from blood sugar determinations at stated intervals after injection of glucose disclose the fact that the sugar is absorbed and stored by some patients more rapidly than in the normal controls, whereas in others the storage is slower than normal. While there may be other factors involved, the liver is the variable of greatest significance or importance among these individuals. A prognosis based on the first curve, therefore, is favorable because this liver may be assumed to have been depleted of glycogen in the course of the toxemia but able to restore itself when given an opportunity, whereas, the slower the rate of storage the more is an actual and extensive liver necrosis with loss of function to be indicated rather than a mere depletion of the cells.

METHODS OF PRECISION IN DIAGNOSIS OF DIABETES.

In the cases cited by Henry J. John, Cleveland *(Journal A. M. A.)*, the condition was diagnosed as diabetes melitus by the patient's physician on the basis that she had sugar in the urine. She was put on a rigidly restricted diet and kept on it until she had lost almost 50 per cent. of her weight; but she still showed sugar in the urine. Further examination revealed that she had a normal blood sugar content; and her ability to utilize carbodydrates—the glucose tolerance test—was demonstrated to be normal by a perfectly normal curve; that is, she was able to utilize all the carbohydrates one could give her. This was strikingly demonstrated later on, when a heavy carbohydrate diet, high in calories as well, failed at any time to bring her blood sugar above the normal level. These findings show clearly that the case was not one of diabetes, in spite of the fact that there was sugar in the urine, but a case of a kidney permeable to sugar, a fairly common condition.

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ORIGINAL ARTICLES

ANNUAL ADDRESS.

DELIVERED BEFORE THE
RHODE ISLAND MEDICAL SOCIETY
June 7, 1923

BY FRANK E. PECKHAM, M.D.
President of the Rhode Island Medical Society

Medicine is a profession of service.

This service is one, the chief aim of which is or should be to help the people in every medical way. If money is the physician's chief goal, his career is a failure and his real service ceases.

There are a number of vital points where the profession contacts with the people, which are neglected. The methods by which the public may be served and the advance in the ability to serve, should be better known. There should be developed some way, some method of advertising if you please, whereby the "wares" the profession as a whole has to offer could be "put across." Some individuals among the various "cults" and some "cults" as a body indulge in direct and extravagant advertising. In the medical profession it ought to be honest but in some way educational. The people and even doctors themselves are anxious to be relieved of their ills and are not fussy how it is done, but they want it really done.

There is a feeling of antagonism in the profession against the various "cults." This antagonistic feeling is so strong in some quarters that vision is obscured as to the real facts. As stated above, the people and doctors themselves will go wherever they can get help. If a doctor or a layman consults and submits to the treatment of the so-called regular profession and fail to get help, they then are in a position to try anything. In consequence, some doctors and a great many people have a try at some of the various "cults" and strange as it may sound to some, they get what they are looking for in a number of instances.

Another phase of the problem I do not think is appreciated. That is, patients are actually being referred to these "cults" by medical men of good standing in the various cities of the country and even by members of this society. On the other hand some patients are being referred by these "cults" to the regular profession. That is happening to me and I do not doubt that other members of this society are having the same experience. This means that there is a leveling influence already under way and if allowed to continue will seek the lower educational level. The feeling seems to exist that the profession is "entitled" to patronage simply BECAUSE they are medical men. If one stops to consider the question from the point of view of service to humanity, no man or set of men is "entitled" to anything. Patronage must first be earned by the character and quality of service. The public always have gone and always will go where they at least think they can get relieved of their ills. If failure results in one place they will try another.

In order to eliminate some of the unqualified men, every one agrees that there should be compulsory educational requirements. This would be helpful for the future and it is also to be hoped that the members of the regular profession will brush up on a few things that are not as yet taught in the medical schools. This would slowly check the actual referring of patients away from the profession so that in time it might cease entirely. With this double sided education all men would be more nearly on common ground and the "people" would more nearly get the service they are looking for. In the meantime there are those in the community who are practicing illegally. Anything which is illegal should be automatically taken care of in the Attorney General's office. This should be done without any effort on the part of the profession.

All health problems should be the affair of the "people." Such problems should be removed as completely as possible from partisan politics and with all cards face up on the table these questions could be settled in a much more satisfactory way than is being done at present. Governor Smith of New York State issued an invitation asking college professors, state officials, health board officers, rural practitioners, and prominent city physicians to meet with him and discuss the pressing health problems of the hour. He selected four important

issues for discussion. Governor Smith did this entirely on his own initiative. Here in Rhode Island any Governor would be interested if the subject was properly presented. After this a representative body of men and women could be gotten together for action. Such a body should also include representatives from the legal profession in addition to those selected by Governor Smith. By such means public opinion could be moulded and a much better chance would then exist to straighten out many disagreeable conditions at present existing. If this is not done by the profession and that comparatively soon, it ultimately will be done by the non-medical community, and trained medical men will have only a small influence.

A vast deal of new knowledge has come to us from the laboratories in the past few years. This has come in so rapidly that it has not yet been completely assimilated. In this phase of medical education and practice, the public is not getting satisfaction out of it. In fact a great deal of dissatisfaction is openly expressed. If the profession is to continue to prosper it must practice medicine in such a way as to benefit the people to the utmost. Laboratory knowledge is essential but it is necessary to have something besides. A man who knows how to make all the tests imaginable is not going to do very much for his patient unless he takes into account the human being back of it all, and deals with that phase of the subject. This important question was recently under discussion by the Council on Medical Education of the American Medical Association. I have talked with several men connected with some of our largest and oldest medical schools about this matter. They all admit that the conditions of medical education are not what they ought to be. The different departments and laboratories teach their specialties as if theirs was the whole subject of medicine. This in a way is proper but all of these different departments should be brought into harmony at the bedside of the patient and made to assume their proper relationship, which is one entirely secondary to the clinical picture. Or, as an editorial writer has expressed it, "The curriculum must be revised so that general medicine shall become the *'piece de resistance'* of the entire medical curriculum."

A prominent practitioner in a large metropolitan center being obliged to give up practice because of some trouble unknown to him decided that the "Group System" was the proper thing. He went to a prominent medical school where the complete staff could have a chance at him. At the end of two weeks he had a number of typewritten pages which set forth the various findings. The doctor then exclaimed, "Well, this is all very well, but what can you do for me?" The answer was, "Oh, go South." Completely disgusted, he returned home a sadder and wiser man and under the care of an excellent and experienced practitioner made a complete recovery. He is now back at hard work and in excellent physical condition. It must be the experience of many men who know results of laboratory tests and special findings, but who are not so closely connected as to have their vision obscured, that patients are at times told there is nothing the matter with them, when in reality with their own visualization keen and clear, the diagnosis is very evident.

This leads to the conclusion that out of all these methods the general practitioner must emerge stronger and better equipped than ever. He must be a man with knowledge of all of the laboratory tests but probably unable to make many of them because he will be too busy with patients. He will be able to make a first class all around physical examination and know instantly from experience just what laboratory and special tests to call for. He will not make the diagnosis from these tests however, but will use them to check up his hard headed experience and judgment. In this way the general practitioner must again come into his own and really control the situation.

However the group method is doomed to failure in the majority of cases. If four or five men, each a strong man in his particular line, meet together, no one of them is going to yield to the others. One will not admit a given sign or symptom unless he can get it himself and not being skilled in that line, he doesn't get it and refuses to believe it. If, on the other hand a group is dominated by one strong personality who takes the group findings and then with his own clinical ability and judgment makes the diagnosis and institutes the treatment the result will be much better. Many groups have been formed for commercial reasons. It goes without saying that this is entirely wrong and deserves failure. Out of forty-eight groups investigated forty-three were failures. There are fun-

damental reasons why group systems do not give the people what they want. For example a surgical group will do surgery in cases which can perfectly well be cured without operation. A physician visiting such a group had witnessed just such an uncalled for operation. When it was all over he asked the operator if he had ever treated such cases by other methods. His answer was, "This is a surgical hospital."

Another phase of modern medicine is that of specialties. There is a tendency for young men to become carried away by some specialty either during their medical school days or in their hospital services. These young men are beginning their careers as specialists. Their only groundwork is the one obtained in a hospital and for private practice this does not seem to be sufficient. They are lacking in the broad foundation which can only come from a general practice and that contact with the human being back of it all. This subject is also being discussed along constructive lines and doubtless steps will be taken attempting its correction.

The profession since time began has not been inclined to co-operate. Each man has gone along his own way letting the other fellow do the same. The hospitals have never been really used as they could so well be, for the mutual benefit of the staff as well as for the advantage of humanity. Every man goes in and does his own work and gets out again. The staff meetings as just now conducted have to do with what is dead and gone. Cases and groups of cases should be carefully studied by the staff. Methods of treatment on the living cases could thus be made of the utmost value. This co-operation was made use of during the war and in the latter part of the war a position of "liaison" officer was created to assist in getting the different departments together. This co-operation in hospital services would be educational to the men so that they would "get together" a little better in actual practice. This getting together would also do away with at least some of the jealousy which seems to exist among medical men. Apparently it is difficult for human nature to see any good whatever in a competitor. It is on account of this that a code of ethics became necessary. The best ethic to make use of is the "golden rule" but the golden rule has been described as one for the "other fellow" to follow. Feeling that I am too matter of fact to deal with this subject successfully I am going to quote a very short article on ethics clipped from the publication *Life* and signed J. K. M. The title is "In Front of the Manufacturers' Club."

"Ethics are rules adopted by men to protect themselves from each other. They do not. In modern life their chief feature is their elasticity. Any A No. 1 ethic can be stretched from Nome to Cape Horn, linear measure, and still spring back to a smugness that will not even wrinkle a frock coat.

"Every time he faces some doubtful deal that promises a good profit, the man who owns a well-trained set of ethics asks himself, Is this ethical, or is it not?

"If the answer is 'Yes' he goes ahead and takes the profit.

"If the answer is 'No' he goes ahead and takes the profit.

"If the answer is 'Most emphatically not,' he decides that he has been working too hard and needs a vacation.

"And, oh, yes, he goes ahead and takes the profit.

"At best an ethic is a spineless creature. It is the sort of animal that slinks into a corner and cringes while the boss reads the report of the State Factory Inspector.

"In fact, it holds the long-distance cringing record of the universe. It can go into a cringe on the morning of any given day and sustain that posture until its owner has made a suitable contribution to the party's campaign fund. Then it comes out, smiling Uriah-like and dressed in indecent black, to attend the annual convention of the Manufacturers Who Wouldn't Think of Such a Thing.

"Still, ethics are not generally despised. Everyone likes to have one or two about the office. They are so obliging, you know; so obliging that they can make a pretzel look like the shortest distance between two points in their efforts to twist themselves to meet a not-so-particular situation.

"Ethics are like calories, vitamines, complexes and other modern discoveries. They are all right if you do not take them too seriously.

"If a particularly pernicious ethic interferes with business, you know how much an ethic will bring at a receiver's sale."—(J. K. M.)

Certainly J. K. M. has lived and has been "up against ethics."

This society as a body should be intensely interested in any number of public questions which directly concern themselves equally with the people. In Rhode Island I am told there is a large number of tubercular cattle. Most of the milk sold has to be Pasteurized to prevent the spread of tuberculosis. If more cows could be obtained free from tuberculosis this would not be so necessary. We hear a lot about how much better babies are carried through the first year of life by modern methods of treating milk mixtures, but somehow no mention is ever made of the fact that these babies have so little resistance on account of these same modern methods that the most of them die in the next few years. One-half million children under 10 years of age die every year in these United States.

This subject should be taken up in a much broader and more fundamental way than at present is being done.

There is just now considerable activity towards arousing the public to the importance of health examinations. Any state society, this state society, could inaugurate such a movement and the people would respond if they could get what they were looking for. The object of such examinations would be quite naturally the prevention of disease by discovering the earliest signs of faulty function of any of the organs. To begin with, it is the consensus of opinion that there are very few physicians trained or competent to make such examinations. These examinations would have to do largely with people who are well or at least who do not realize that there is anything particular the matter. The trained physician today is trained to recognize and treat pathological conditions. For this new work he must be trained to recognize the faulty physiological conditions which precede pathology. He must become more familiar with very early signs of disease (or pathology). He must be very much better trained to give advice regarding methods of living, eating, dressing, sleeping, exercising, etc., as well as hygienic conditions and the environments of individual patients. The American Medical Association is already interested in this matter. The state society could by means of an ACTIVE committee stimulate the interest not only of the medical profession but by ethical methods, the general public. When the public really appreciates that something is for their benefit, they will respond and their interest will increase as time and results demonstrate the advantages.

Insurance in Rhode Island is not what it ought to be. The compensation act is better than it used to be but not satisfactory. There was a hearing at the State House a few years ago at which it was brought out that the premiums collected amounted to a very large per cent on the capital invested in this state. Does this indicate that either the premiums are too large or the amount disbursed to employes and doctors is too small or possibly both? These figures are obtainable as I understand it, and if made public in the proper place would be helpful in correcting such a condition.

There are several other vitally important questions which could be well taken up by this society as a whole, and by publicity methods which could be perfectly ethical, almost anything which was for the benefit of the people as a body politic could be obtained. The profession has never gone into such things except in a mild way. It should act in a constructive way and with such enthusiasm that failure would be an impossibility. Such things can only be accomplished, however, by a better cooperation and friendship among the members of the medical profession.

I firmly believe there is no class of men who give more of themselves for humanity's sake. Also, I believe that when a medical man gives of his skill and ability just to be helpful to some suffering human, especially when there is no possible material reward, he comes near to following in the footsteps of the humble Nazarene, who simply went about doing good. If this is so for the individual, how much more good could be done if medical problems directly affecting the public could be taken up in a large and in a public way, by such a body of men as is represented by the Rhode Island Medical Society.

In closing I want to say that I have enjoyed being your presiding officer for the year that has passed. Every man whom I have asked to read a paper before you has promptly and without hesitancy said "Yes." One reader asked for the privilege. This shows a spirit that the society may well be proud of. You have a wonderful secretary. He knows all the ins and outs and in a very quiet manner makes the way of the president one of ease.

I wish to thank you for your kind attention.

DIATHERMY IN PNEUMONIA.*

HARRY EATON STEWART, M. D.

NEW HAVEN, CONN.

Modern Physiotherapy had its inception in the Medical Corps of the army. There for the first time all of the physical means of treatment were grouped together under the control of regularly trained medical men who specialized in physical therapeutics. More than a quarter of a million treatments per month are still being given by the Government Medical Agencies. The results have been on the whole very gratifying, and they indi- post-war government work. *Pneumonia* is one of these conditions.

Electricity was very widely used in the Service work, and diathermy proved to be perhaps the most valuable modality. The heat produced by this current develops deeply within the tissues, differing sharply therefore from other methods, the aim of which is to drive heat into the body from without.

American physicians, among them Byron Sprague Price and Frederick DeKraft of New York, were the first to suggest or to employ diathermy in pneumonia. There were, however, no detailed case reports nor any information which would throw light on the value of diathermy in pneumonia as far as the writer is aware, until his publication of the first ten cases treated under his direction at the U. S. Marine Hospital No. 21, New York City, in 1922. As far as is known there is no mention of this subject in foreign medical literature. For some time it was thought that diathermy would help in the treatment of lobar pneumonia. From every point of view it seemed reasonable to suppose that a centrally located heat of from 110° to 120° F. developed in the affected lung without any cost to the body in instituting this rise in temperature should have a favorable effect upon the pneumonic process. It was believed that this heat would dilate the pulmonary capillaries and lymphatics, promoting a more active circulation. Perhaps to some extent it might also "melt down" the exudate, thereby increasing the amount of pulmonic ventilation. Also it was thought possible that it might inhibit and to some extent destroy the organisms and reduce, through its known analgesic effect, any associated pleuritic pain.

Dr. Young, Medical Officer in charge of the Hospital, and Dr. Bryan, his Chief of Medical Service, agreed with me that we would use it on the first case which seemed beyond medical help. The first such case occurred in January, 1922. The results we obtained were startingly favorable, the temperature dropped by lysis, each treatment gave marked symptomatic relief, and the man made an uninterrupted recovery. We realized that this result might be merely accidental, that such things occur particularly often in this disease, and yet we were sufficiently encouraged to continue with this form of treatment.

The first series of ten cases were reported to the American Electrotherapeutic Association last September and printed in the October number of the Society's Journal.

In the fairly large group treated since, the following routine has been carried out:

The daily physical findings were made in each case by the ward surgeon, Dr. William T. Boland, and the present medical chief, Dr. John Ridlon. The charts kept by the nurses were carefully checked up. The laboratory work was done by Dr. Taylor, Chief of that Service, and the department of physiotherapy was concerned simply with the actual administration of the treatments.

The work done during this last winter, fall and spring is reported by the permission of Dr. C. H. Lavinder, present Medical Officer in Charge. The writer is especially indebted to Dr. Boland for gathering together and analyzing data, including blood pressures, etc.

These hospital cases together with several groups from private practice of myself and colleagues give us about seventy cases to date in which diathermy has been used in lobar pneumonia.

We have had all types of the disease checked up carefully with complete clinical records and a fairly large group of controls in the hospital. It is realized that this is not a sufficient number of cases in which to reach definite conclusions, but they certainly justify further use of this form of treatment.

The writer has been encouraged to continue this work by the fact that every aide, nurse and physician who has actually seen the treatment properly given has expressed their faith in it. Further

*Read before the Annual Meeting of the Rhode Island Medical Society, June 7, 1923.

study may demonstrate that diathermy is not equally efficient in all phases of the disease, perhaps even contraindicated in some.

To treat cases by diathermy the physician must have an efficient piece of apparatus delivering a good D'Arsonval current and supplied with a meter. He must understand the physics and physiological effects of the current and know his technique. While diathermy technique is not very complicated, it is rather exact. As in other types of treatment the earliest possible administration of diathermy is desired once a diagnosis is made. As far as the writer is aware, no case has yet been lost in which diathermy was used before the third day. This does not mean that cases treated early will not be lost in the future, but it at least emphasizes the value of early treatment. We do not have to wait until the sputum has been typed as is the case in using serum in type I. The word "cure" is not used nor meant to be implied in this paper. It is the writer's personal opinion that an adjunct which may be applied to all types of the disease, which will prove at least as effective on the average as serum has proven in type I, has been found.

The Nature of Diathermy. Let us consider for a moment a few features relating to diathermy and its effect on living tissue. Diathermy is the application of the bipolar high frequency current of D'Arsonval, discovered by him about 1890, and first used in this country in 1906. Its use in hospital practice by means of modern apparatus dates back to only 1910. Our experience with this modality in the government work must have exceeded a million treatments in 1919, and is still not far from that figure annually. New indications for its use in certain pathological conditions of lung, heart, kidney and brain are rapidly being worked out. Pneumonia and empyema are two of these conditions.

The D'Arsonval current is one of high voltage and relatively high amperage which oscillates with extreme rapidity. The apparatus should by preference be supplied with a 110 volt, 60 cycle alternating current. This current it "steps up" in voltage to many thousand, cutting down the amperage in direct proportion and increasing the alternations to a million or more per second. The current thus produced has been compared to water power, particularly to a stream coming from a fire hose through a spray nozzle, harmless, yet with great power behind it.

The *spark gap* requires constant care in order that the current may be smooth in quality, free from faradic effect and of sufficient volume due to proper charging of the condensors. The *milliampere meter* consists of a wire in the circuit which expands by the heat produced, moving the needle on the scale. It indicates the total amount of current the patient is receiving, but does not indicate with any exactness the amount of heat actually being generated in the tissues. This depends upon the current density, that is, the number of milliamperes per square inch of electrode, and the density of the tissues through which the current passes. For instance with 2,000 milliamperes of current and 5 x 4-inch plates we have a current density of 100 per square inch of electrode. This meter reading and these plates would develop far greater heat applied to the knee joint than to the abdomen or chest.

If the plates were larger less heat would be developed in either locality. In the consolidated lung we have an intermediate condition of soft tissue density and use from 1,000 to 2,000 milliamperes of current by means of about 5 x 7-inch electrodes. It must be remembered that the heat produced varies as the square of the current strength, therefore, slightly increased meter reading may mean considerably greater heat production.

The *physiological effects* of diathermy on living tissue naturally differ greatly from those of any form of external heat. We obtain locally very little effect upon the skin with the use of the proper technique. In the deeper part of the pathway of the current we have the main effect, which is an acute temporary dilatation of the capillaries. This causes both a thinning of the capillary wall, and widening in the intercellular spaces, resulting in an augmented outpouring of blood serum rich in repair material. It means also that in a given tissue area there occurs a vast increase in all of the blood elements, the erythrocytes with their contained oxygen and of phagocytes which enhance the local resistance to bacterial invasion. The net result is to double or triple the local repair material and protective forces and to promote those cellular interchanges of gases and fluids upon which metabolism depends. Thus a temporary active and not a passive congestion is brought about. The resis-

tance to the circulation which takes place in the finer capillaries is lessened by their dilatation. Hence the speed as well as the volume of the local circulation is increased. The lymphatic drainage is also augmented. The oscillations of this current are so rapid that no ionic movement and no muscular contraction is induced. Pain is relieved by the effect of the current on sensory nerve endings within its pathway. Within a very short time after the cessation of the current the capillary dilatation disappears. Systematically there is a slight rise of body temperature due to the circulation of the heated body fluids, the same factor which prevents local external heat from having any degree of penetration.

In febrile conditions such as pneumonia little further increase in temperature is found during the treatment. As a rule both systolic and disastolic blood pressure is reduced slightly. In pneumonia the reduction is often quite marked and was for a time considered a contraindication to its use in patients with hypotension.

A number of experiments are given in the literature which illustrates the effect of diathermy, showing an increase of body temperature, which may reach as high as 20° F. on the skin between too closely placed electrodes from the so-called edge effect developed between them. It is very easy to cook meat, potatoes or egg albumen between the electrodes with this current. Here we have no fluid diffusion to prevent excessive heat accumulation. In various experiments upon living animals the temperature has been raised from three to twenty degrees. We may be absolutely certain, however, that no destructive effect is obtained where the proper technique is employed.

Apparatus. Practically all of our work was done with small compact portable apparatus supplied with a meter. It is necessary to use one which will deliver a D'Arsonval current of good quality and up to 2,000 milliamperes. A machine which will show a high meter reading with a comparatively low spark gap is to be preferred.

Electrodes. In all of our pneumonia work we have used composition 22 gauge flexible metal electrodes. This material comes in sheets at moderate cost and can be cut into convenient sizes and shapes. The edges should be sharply turned back and rolled flat with a slightly longer flap on one end for the attachment of the cord clip. Some prefer the thinner metal which may be doubled and still remain very flexible.

Technique. With a pair of plates suitable in size to the involved area of the lung and the machine set up, we are ready for the treatment. The electrodes are covered with heavy warm shaving soap lather. The posterior one clipped to the cord and turned lather side up on a heavy folded bath towel. By depressing the mattress this electrode may be gently moved under the patient to the desired location without disturbing him in the least. The anterior plate is then clipped on and placed on the chest wall so as to include the affected lobe or lobes directly between the two plates. They should not approach each other on the lateral wall of the chest, otherwise an undue amount of current will pass between these near edges rather than through the affected lung. The posterior plate is secured by the patient's weight. The anterior one may be gently held on the chest or secured by adhesive plaster. Cords and clips should be covered so that they will not be torn loose by a restless or irrational patient. With everything in readiness the rheostat and spark gap are slowly advanced until the desired amount of current, usually between 1,000 and 2,000 milliamperes is reached after about five minutes. This is maintained from fifteen minutes to an hour, usually twenty to thirty minutes, after which it is slowly reduced during a further period of two or three minutes to zero. If it is desired to localize the heat more sharply this may be done by using a slightly smaller electrode nearer the point it is desired to reach. If any points of burning or tingling are complained of, turn the current slowly off, reinsert more soap lather with finger or brush, press the electrode gently in place and again turn on the current slowly. As a rule the treatments are given twice a day, but there is no reason why in the critical stage of the disease more frequent applications should not be made. One treatment a day is probably sufficient during the period of resolution.

Results. I do not need to remind the members of this society as to the caution which should be exercised in accepting any new treatment as of value in a disease which varies so greatly both in type and seasonal epidemics as does pneumonia. In estimating the value of diathermy in this dis-

ease many factors must be reckoned with. Among these are the patient's age, previous indulgence in alcohol, the day of the disease in which the treatment is first instituted, his care up to that time, and the concurrent nursing and medicinal treatment he received. Furthermore the effect of the treatment on the mortality rate, temperature, pulse, respiration, additional lobar involvement, rate of resolution and complications should all be made clear.

Our cases were all adults, nearly all of them merchant seamen, averaging about thirty-five years of age, and many of them were moderate users of alcohol. Most of them were taken ill on ship board with little skilled care until they arrived in the hospital. Judging from the mortality figures obtainable, the rate in such a group should be about 40%. We had a group of twenty-one control cases whose treatment and care was similar except that they did not receive diathermy. In the group treated by diathermy the mortality was less than 20%, in the control group it was 42.9%. A number of other cases treated by diathermy outside of the hospital added to those so treated in the hospital, gives an average mortality of less than 12% so far. Among the deaths in the cases treated by diathermy were two in which five lobes were involved, two others in which four were involved, and none of them received diathermy before the third day. Temperature, pulse, respiration and rate of resolution all seemed to be favorably effected by the treatment. Extension of the disease, however, to other lobes was not prevented. The temporary symptomatic results were quite marked in nearly every case treated.

This period of lessened pain and dyspnoea lasted in most cases several hours and was in itself enough to justify the use of diathermy in these cases.

In concluding, I wish to emphasize the absolute harmlessness of diathermy in these cases when properly employed. No definite contraindications for its use have yet apepared, but as before stated a larger group of case reports may reveal such contraindications. In view of the fact that symptomatic relief is almost certain, that the treatment is without danger, and that the figures so far show a marker reduction in mortality, which we have every reason to believe will be confirmed when more cases are available for study, I feel that the further employment of diathermy in pneumonia is absolutely justified.

A CORRECTION.

In the discussion of Dr. Miller's article on "Obstetric Shock," which appeared in the September issue of the JOURNAL, that of Dr. C. H. Leonard should read as follows:

"It seems to me that in this very interesting paper Dr. Miller has emphasized his part of the work and has attended to that thoroughly. He omitted, however, to emphasize the physician's duty of following up the delivery, and of seeing that the uterus remains *contracted*. He has not gone into our part of the business. That, I feel, is one of the most important things. I have seen the nearest cases to shock *due to the attendant's not* following up the contraction of the uterus (e. g., by holding his hand over the fundus).

"About the only anaesthetic I remember that the late Dr. Chas. Wiggin used was chloroform. He would put a teaspoonful or more before the patient and go ahead with the forceps. I have not followed that, but have followed the plan of Professor Fordyce Barker, of New York, who advises us to put a few drops on a little handkerchief in the bottom of a light tumbler and have the patient hold it before her face as a pain comes on, and before she would greatly come under the influence of it she would drop it, and the worst of the pain would be over. I may note that on one occasion *the late Dr. George W. Stanley, of Slatersville, a Fellow of the State Society,* was called out quite a distance from his home to attend a woman in confinement. They had no trained nurse and no one in attendance only those in the family, or perhaps a neighbor, and he had to attend the patient *without professional assistance though he had to deliver her by craniotomy.* And she got well."

Very truly yours

CHARLES H. LEONARD

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Section on Medicine—4th Tuesday in each month, Dr. Charles A. McDonald, Chairman; Dr. C. W. Skelton, Secretary and Treasurer.

R. I. Ophthalmological and Otological Society—2d Thursday—October, December, February, April and Annual at call of President Dr. H. E. Blanchard, President; Dr. Jeffrey J. Walsh. Secretary-Treasurer.

The R. I. Medico-Legal Society—Last Thursday—January, April, June and October. James B. Littlefield, Esq., President; Dr. Jacob S. Kelley, Secretary-Treasurer.

EDITORIALS

ENLIGHTENING THE PUBLIC.

Several months ago, in these columns, it was suggested that the profession take steps to enlighten the general public on matters medical, to give them a fair idea of the enormous amount of time, thought and sacrifice given by the physicians of the world, to explain how much has been accomplished in some fields and what difficulties have been met in others, to state simply certain theories which we hold and to repudiate theories and statements made by half-baked exponents of the healing cults.

It is gratifying to learn that in at least two states, this idea has been developed to the point of actually beginning a campaign to educate the public as to matters pertaining to health. Another state is preparing to carry on an educational campaign through the newspapers. This work is being done under the auspices of the State Society.

"Hygeia" is also justifying its existence by explaining in clear, easily understood phrases certain problems and subjects which the laity are anxious to learn about.

We would again recommend for the consideration of the Rhode Island Medical Society, the advisability of instituting free public lectures as a means of enlightening the masses and of shaping public opinion.

VALUE OF CLINIC WORK TO THE PHYSICIAN.

Outside of cities which are medical teaching centres, hospitals have difficulty in obtaining the services of physicians to treat patients in the out-patient department. Certainly it is hard to find the right kind of men. In the first place the hospitals prefer to have on its staff men who have graduated from the best schools and served in the best hospitals. In the case of specialists they should have had a real training in their line of work and not simply taken a so-called course in some American or foreign medical centre. At any rate, every physician who is selected for any hospital staff should be well qualified.

There is one characteristic which sometimes overbalances excellence in training so far as usefulness is concerned and that is the faithfulness with which the hospital work is performed. Too many men do not take the responsibility of their positions at all seriously and perform their duties superficially, well enough to keep them on the staff and allow them the privilege of treating private patients. They are late for clinics or ward visits or do not show up at all and patients are "run through" as rapidly as possible.

Instead of appreciating the honor of being associated on a staff made up of the best talent in the community, and of the wonderful opportunity for studying disease in a hospital, provided with all modern appliances, too many young men consider that it is the hospital who is fortunate in having them on its staff. Work in the out-patient department is looked upon with small favor and is usually done with the hope of a "house" service. As a matter of fact, service in an out-patient clinic can be made to be more useful to the physician himself than a house service. In the medical centres of this country and Europe, many authors of text-books and noted in various lines of work have done their work entirely in an out-patient service, never having had a ward service.

There may have been some discouragement to out-patient physicians in the past because of the lack of equipment and assistance. But that is not true today. Better quarters, abundance of equipment and social service make the duties of the out-patient physician much easier, giving him more time to concentrate upon individual patients.

Every young man should seek work in one or more out-patient departments, seek to learn all he can by doing progressive and faithful work. His clinic will grow as surely as any business grows when a live man is behind it, and when the time comes he will be ready and will be rewarded by the hospital authorities by being called to fill vacancies in the house. His good work in the out-patient department also makes his job in the house much smoother. When he asks for apparatus and assistance for his work, the hospital authorities will gladly grant it when it might be refused to another who shows little interest in his duties.

OUR MEDCIAL LIBRARY.

That our Library, admirably situated as it is, should be so little used by our Fellows or by allied organizations has long been a matter of common debate. Certain conditions, however, have no doubt contributed to this undesirable state of affairs. Primarily, we are so situated that the sound-waves from both the trolley and the steam roads seem to find a peculiar affinity in our auditorium and council chamber; in addition, we might say that the acoustics, especially of the auditorium, do not greet our expectations happily. If we might suggest to our trustees, without offense, the advisability of correcting as far as may be this fault, it would be appreciated by everyone that has occasion to be of the audience.

A correspondent writes: "Something surely must be done to remedy the unfortunate acoustic properties of the hall in which the Association and the State Medical Society hold their meetings!

"The voice of a speaker, even one standing on the platform, will fail to reach more than half the hearers (so called) unless it is unusually clear and distinct and of just the right pitch. On the other hand, the sound of whispering or talk in an undertone at the rear of the room is conveyed in a confusing way to the very front of the hall."

Another regretable factor appears in proclivity

of many of our speakers, in seemingly failing to realize that they are conducting something of an inaudible monologue—we might say in passing, however, that this propensity is not confined to the medical profession.

We have many men in our societies so splendidly equipped mentally, that listening to whom in ordinary conversation is an intellectual pleasure; that so little significance should be attached to clear enunciation and fullness of voice with these who by study and experience could tell us much, is as remarkable as it is disappointing.

ADDRESS BY DR. CHARLES CARROLL BEFORE THE RHODE ISLAND MEDICO-LEGAL ASSOCIATION, APRIL 26, 1923.

Mr. President and Members of the Association:

The subject this evening is in a general way to outline the purpose of and take up particularly the joint public interests of doctors and lawyers in rehabilitation; lawyers handling compensation cases for corporations and for clients who may be injured, and doctors who in the first instance have rendered first care.

In the first place, what is rehabilitation? It may be defined as the re-education of the person who by reason of injury or disease has become unfitted to pursue his regular occupation. Many a person unless helped by the training for a new job would become a private or public charge.

The interest in rehabilitation in the United States, as far as the Federal Government is concerned, is one of the by-products of the war. The Federal Government early realized that one of the first things that would happen would be the return of some of the boys from war by reason of wounds and disease, deluging our industries by a large group of people who had become unfit to carry on. In consequence our Federal Government passed the Rehabilitation Law, and these men were turned over to the Federal Board for Vocational Education. A plan for rehabilitation was laid out covering a period of five years, based on an average number of cripples because of wounds or because of sickness, providing care and re-education for that average number over the period of five years. Just as the war was going splendidly the armistice came, and consequently, instead of getting subjects for rehabilitation on the average plan, they came to the Federal Board of Vocational Education in a lump. The consequence was that the Board found itself without means for handling them, as its plans were not based on the expectation of handling the entire product at once. The plans the Board had made for training soldiers were useless. The Board found itself without teachers, found itself without schools, without the plants in which to conduct training. The consequence was that the work of the Board came into great disfavor. It found itself with a job on its hands which was too big.

The possibilities of rehabilitation among soldiers are the same among citizens. There are a great number of industrial accidents each year. A large number of persons are so injured as to make the proposition an imposing one for states or cities. A large contingent of citizens is rendered unfit to follow regular occupations on account of disease. Another large contingent is removed from plants or factories by industrial accident. Some victims we see begging, some subjects of charity; all drifting along living unsatisfactory lives.

Rehabilitation from a citizen's point of view aims to take any person who has become unfit, give him sound training and place him on a job. The Federal Government made an appropriation a few years ago to cover three years of service, which expires in 1924, and which will not be renewed unless Federal rehabilitation for citizens is satisfactory. It provides for co-operation between the Federal Government and the States. The States, through State Boards of Vocational Education, set up an organization and undertake to provide education and to meet half the expense thereof, and funds appropriated by the Federal Board make up the other half. This is the same plan that Congress has followed in other lines recently.

In Rhode Island we are ahead of the Federal Government. Rhode Island passed the Rehabilitation act in 1919. When the Federal Law came into effect, the General Assembly accepted the benefits of Federal funds and rewrote the State act making general provisions in the form of the Federal act, and providing for the handling of all cases requiring rehabilitation on account of disease. In Pennsylvania a very elaborate system has been set up. Instead of being in charge of educators, it is linked up with the Compensation Board. In Mis-

sissippi and Minnesota rehabilitation has been provided for in a general way. In fact, twenty-three of the forty-eight states have accepted Federal money and are doing something along the lines of rehabilitation.

In Rhode Island we have had a number of cases commensurate with the total population of the state. We are 26th in population. We have not had a large number of cases, and what we have had show great possibilities. We had the case of a man who lost the hearing in one ear in his youth, and by reason of an industrial accident finally lost the hearing in the other ear. He was employed in a manufactory. Unless something were done it was probable that the man ran the risk of not only losing his hearing but his speech as well. Loss of hearing is usually accompanied by loss of speech, either total or partial. It was decided by the Board that the best thing to be done was to provide instruction in lip reading, the same type of instruction as given in the Rhode Island Institute for the Deaf. Instead of sending him to the Institute, one of the teachers of that Institute was hired to visit the man's home and instruct him in lip reading. He is now back on the job, having learned in six weeks. The use of State money can furnish intensive results beyond his means. He was placed back on his old job. After the man is back, it is most desirable to train him there.

There were two cases of girls with infantile paralysis; one seventeen and one nineteen. The problem was to find an occupation for girls which could be carried on at home, providing reasonable returns and enough to assure self-support, and to do it without taking the girls from home. After the cases had been studied it was found that both girls had had some training; one had a decided leaning towards art, the other had not so decided a tendency that way, although she had some notion of beauty. They were given personal instruction in millinery. We set up a millinery class in the girl's home for six hours a day and furnished materials to the girls to make hats. Now they carry on a good neighborhood trade, realizing satisfactory returns.

We have a large number of cases of men with a limb or part of a limb gone from machine shop accidents, or the accident results in the loss of fingers or part of hand or foot, and when they consider that the hand is one of the most important members used in their occupation they find themselves no longer able to carry on. They need instruction to enable them to carry on another occupation and become satisfactory wage earners. We found the resources of the Rhode Island School of Design a fine thing for Rhode Island. Most of us do not appreciate it. In the first place it has a method of teaching great varieties of occupations, and we found that there at the School of Design there were teachers to teach, and machines and materials to work with in teaching. We found the school willing to respond, willing to match its services against everything. In spite of the fact that our rehabilitation students involve the giving of more time than customary, and special work, the School of Design accepts our students at regular rates. We suggested that they are entitled to more money, but they refused to accept it.

One thing that has come out rather interestingly is the part that early education and training has in the possibilities of rehabilitation. We had one man who had lost one leg completely and part of the other leg, and with a paralyzed left hand, but he had a good right hand. This man came from Europe. He did not have a school education, and no education in America. He had been doing laborer's work. There was nothing constructive we could do with that man. Where there has been no preliminary education, sometimes nothing can be done.

When anyone with an injured hand or leg chooses to pick out any ordinary type of education, we do what we can to transfer them there. Commercial practices are sometimes more valuable. One who has lost a hand or leg sometimes has the ambition to go to commercial school to learn stenography, typewriting or accountancy, seeking to enter offices. The question which we have to settle is whether or not their preliminary education is sufficient to warrant sending them to commercial school—whether the person will be worth while.

We have separated our work for the blind from rehabilitation. The work for the blind is still carried out by the Institute for the Blind. We have not had rehabilitation cases which could be handled otherwise.

Prosthesis is the furnishing of artificial limbs or appliances. The old type of prosthesis is the furnishing of something ornamental. The first

case we had was that of a boy from Newport, whose hand had been caught in the gears of a chewing gum machine and taken off. Somebody in Newport told him of our work. He came to Providence and we undertook to train him for a job. We told him that we might furnish him with something to replace his lost hand, and showed him a picture of a Dorrance hook. This is an artificial hand with two rings of steel bent together with springs and rubber, and operated for opening and closing by a strap over the shoulder. Once he would get hold of anything it was impossible to take it away until he opened it up. It would be impossible to take a pencil or tool out until he opened it. It was arranged to hold a hammer, or a razor, or the handle of any utensil to feed himself. We offered to buy him a Dorrance arm which he could use every day in his home and in the shop. He said: "I don't want that. If I have a thing like that the public will look at me. Can't you get something that looks like a hand?" One of the things we have to contend with is this. They are not satisfied with a useful artificial limb. They want something to look like a real hand or foot so people will not turn around and look at them. Nobody wants anything which does not look like the real thing. Most of them have no ambition to care for work. Many have compromised by taking the Dorrance hand and also an artificial hand to wear on the street. When he leaves work the artificial hand replaces the Dorrance one. He has every appearance of having had no injury, and looks like a regular fellow which he wants to be.

Prosthesis means more than to restore personal appearance. Some want an appliance which can be used for work. The Dorrance arm is quite satisfactory.

We have a boy in the School of Design at the present time who has a talent for drawing and design, but who has had very little occupational training. He was injured while working on a printing press, but did not know enough about the printing business to be successful if he took up that trade. We advised him not to return to the printing business because he did not know about it. We decided to try him out at the jewelry department at the School of Design. He had rather an unusual injury. The surgeon in handling him cut away part of his hand, the fingers between the little finger and thumb being taken off, leaving him with the thumb and little finger. It was one of the most difficult prosthesis cases which can be had. It would have been better for the boy if the doctor had cut his whole hand off, because we were faced at the outset in the handling of a difficult case and training the boy to use an artificial appliance. What remained of the hand was more a detriment than a help. We found something to replace the three fingers, but finally decided that he would get much better results with the artificial appliance and working in that way.

Where is the lawyer's interest? Although the Workmen's Compensation Act was drawn for the purpose of taking business away from lawyers, still there is a great deal of compensation business which is handled by lawyers. From unfamiliarity with the Compensation Law many of those who are injured will go to a lawyer to get the best settlement which may be had. In dealing with lawyers of corporations or indemnity companies, they will be at a disadvantage unless they have equally trained men to represent them. There is still a volume of business falling to lawyers. The Compensation Law provides in a definite way for payments covering long periods of time, for periods of time in cases of slight accidents. The tendency is for lawyers who are serving corporations and guaranty companies and who are serving their clients to work for lump sum settlements. No worse thing can happen to a man who by reason of an accident is liable to be a subject for rehabilitation. In order to train such a man he must be under training for a considerable length of time. If he gets a lump sum he will stop and do nothing. He lives on it, and when the money is gone he is reduced to want.

If proper co-operation could be had he would not have a lump sum settlement, and this lack of ready money in a more or less large amount would teach him to consider his needs. The money would be spread out in payments, and the man not having a lump sum in a large sum of money to fritter around would get just enough for the period of training to insure support of himself and family. It is a most difficult situation in rehabilitation. We have plenty of money for instruction, plenty for prosthesis, but no money for support. When the law was passed it was expected that a man would have support, and that the Compensation Act would operate as laid down in the statutes, payments covering long periods of time. On compensation during training laywers can help us by consider-

ing the primary interest of the man seeking compensation. I do not believe that $3,000 in a lump payment is worth as much as spread over a long period of training. After compensation is agreed upon of a certain sum, don't let him have it all together. It looks like easy money. Lawyers can help by working against lump sum settlements and calling attention to rehabilitation service, telling their clients what can be done at the expense of the State and Federal Governments. We are going to stay even if the Federal Government goes out after 1924.

Doctors operate with a view toward Compensation laws. Usually surgeons save everything possible. Where three fingers are gone, the surgeon inclines to save as much of the hand, or as much of the finger, as possible. There was the case of a man who fell down stairs, and had an operation to remove part of his foot. Blood poisoning set in, and gangrene. The doctor in the hospital decided to operate. The man was operated on ten times, a small piece of the leg being taken off each time. This doctor was trying to save everything possible, having in mind the Compensation Law. Doctors know as well as lawyers that compensation depends upon the nature of the injury, and that larger compensation is paid for a part of leg than for a part of foot, and that much depends upon the amount taken off. They operate with that view in mind.

There was a case of a boy who had been injured in Pawtucket in a railroad accident. Doctors finished him up by cutting off part of his right foot and part of his left foot. We have been trying to find an artificial appliance for the boy to work with without crutches and cane. A high school boy, leading his class, had an injury to his hand and arm. The doctors operating saved part of the stump of the hand. We tried it out with different companies and experts to get a proper appliance. It would have been better for the first boy to have cut off both feet above the ankle, and for the second boy to have cut off the hand above the wrist. In either case the job of furnishing artificial appliances would be much simpler. We want the doctors to think of prosthesis when giving first aid or making operations; to cut with a view toward prosthesis, not only the possibility of saving everything possible; to consider the future, to cut enough to make a clean job—to make a prosthesis job. We want the doctors to suggest to patients and companies the possibilities of prosthesis and rehabilitation.

The doctors have a wide field in disease. Persons having congenital diseases, or other disabling diseases, become proper subjects for rehabilitation. In a great many instances they are better taken away from their occupation and trained for something else better suited to their condition. Should tuberculosis be present, they should be taken away from confined employment and be on something else. Sometimes a person has ability, which, if properly trained, would make that person a satisfactory citizen.

I have tried to put up these problems and would be glad to have discussion.

Dr. Carroll was asked if there could not be a second operation performed in some of these cases to make prosthesis more readily handled; to which he replied, "There could be a secondary operation if someone would pay for it. It would involve a great deal of expense for operation, hospital care and period during which the person would be completely out of service. The doctor should have considered possibilities of the future."

Dr. Brown: May I ask how old was the boy who lost the fingers of his hand?

Dr. Carroll: Nineteen years old.

Dr. Brown: There came to my mind the case of a man who had lost three fingers of his hand in a like accident. This accident occurred when the man was in his twenties. He was employed moving ashes out of a cellar, but he could lift more with his little finger than I could lift with my whole hand. In order to test out his strength I found out how much he could lift. I feel that everything possible should be saved. I am reminded of a certain surgeon to whom someone complained that his stumps were irregular. He replied that he was not making stumps to fit artificial limbs, but would require that they make the limbs to fit the stumps. It is not my belief that any surgeon amputates to save a lot, but to make a clean job. A man does not seem to have much concern about anything other than how he is coming out. He is more concerned to get along himself than that the country will prosper.

Dr. Carroll: Most of them have enough foresight to realize the possibilities of rehabilitation. Some do not. If a case can be handled in a definite way, most of them do not care. Handling is

most unsatisfactory. It is most difficult to get them to undergo training.

Dr. Gosline: The discussion has been so far of accident and disease, and of physical disabilities. It seems to me that there is a training field for mental affairs and mental disease. I would like to ask if any work has been done along these lines—rehabilitation of mental disease.

Dr. Carroll: We have had no cases of mental disease. What cases we have seen are in the Exeter School. Dr. Ladd says nothing can be done with those who are decidedly feeble-minded.

Dr. Carroll was asked, "In the case of a man working for a construction corporation, living in Rhode Island, but going into another State to work, what law applies, the law of Rhode Island or the law of the other state?

Dr. Carroll: The law of the state in which the accident occurs. Under the Rehabilitation Law, any resident of Rhode Island would come under the law of Rhode Island, and apply for rehabilitation in Rhode Island.

Mr. Littlefield: I would like to ask if you have any agencies for locating cases.

Dr. Carroll: We have nobody traveling looking up cases. People about the State who know about the work send in cases. There are not enough to keep us busy. We can do a lot more work, but we are afraid to advertise too extensively.

We see persons begging on the street. Nobody who is begging has been induced to take rehabilitation. They say they are getting more money than they ever earned before. I have talked with most of the sturdy beggars, and not one would make application.

Dr. Skelton: Of course some of these permanent and total disabilities can be to some extent, in my opinion, avoided. I have perhaps done more compensation and industrial surgery than any other surgeon, with the exception of Dr. Flynn. For several years I have had the oversight of more than twenty-seven hundred men, who keep me busy, and I speak from the viewpoint of a surgeon who has had a considerable amount of experience in industrial surgery. I have one thing in mind—to preserve as much as possible every part of the human anatomy to give man usefulness. I have done the same thing many times. I had fifty-nine finger cases in Warren in one year. Every man had a good result.

The Compensation Act in Rhode Island is the rottenest condition of any state in the Union. We can never tell when some shining light of the bar will slip something over on us at the State House on the Compensation Act. In serious injuries like fracture of the hip or compound fracture of the thigh, very little is done before $200 is eaten up. Insurance companies have limited the services of a doctor to eight weeks; and his fee to $200.

Dr. Kelley: The limitation to $200 is by statute. I am sorry that no medical man has come to court and asked if a man is worthy of his hire. I believe that if a man gives his professional attention to a case, he can recover even if it amounts to more than $200. I have dealt with quite a number of representatives of insurance companies, and find they are very chary when approached on the $200 proposition. Men of integrity feel that they are willing to kick over the traces to see if this cannot be brought to an issue. This $200 limit was something put over on the doctors.

Dr. Skeltons I would like to say that if Dr. Kelley should go before the court with a bill of $210, the court would decide that he had no honor.

Comment was made that "The question of the amputation of a perfectly good thumb for the sake of making a perfectly good stump would meet with the oposition of the patient, and he would not give his consent. He would not allow anybody to cut off a perfectly good thumb to get a perfectly good result for an artificial hand."

Dr. Carroll: There was recently an interesting exhibition in Cleveland of artificial appliances of every sort. There were men using these appliances, and it was a revalation to see what these men could do. There was an artificial limb salesman, who came into the office a while ago. I found that both his legs had been taken off above the knee, and he was using artificial limbs. He was so good that the company had hired him as a salesman.

Mr. Matteson: From limited experience I find that the pleasure of a client is to try to get a lump sum settlement. Two women, one French, came to me a while ago. The French woman was a weaver in Pontiac, and her left arm was useless. She came from Canada, and was sure she could buy a little shop in her native village where she could be in the center of activities, and insisted upon a lump sum settlement, and all views from

her circle were to that effect. The other was a laundry woman, and she insisted upon getting a lump sum to get an interest in a periodical store in Baltimore. I think the lawyers will back me up in saying that the practice is to make lump sum settlements. These women were thirty-one or thirty-two years old. It is something to think about. Perhaps the next one will be young enough to take advantage of rehabilitation. The tendency has been to get money and get away with it.

Judge Rueckert: In view of the pressure exerted on a lawyer, it is asking a great deal to expect that a lawyer should refuse to listen to the wishes of his clients in a matter of this sort. Some lawyers will do that, some will be influenced by the fact that the client wants a lump sum, and satisfy their clients and keep the business that comes to them for this purpose.

Mr. Littlefield: I have seen a number of cases where small payments coming regularly is the salvation of the family, and my experience is that a lump sum would very soon be gone in some foolish venture. In one case I obtained a settlement for $3,000 for a little girl's hand, but they were marched to the bank to deposit it in her name so that it could not be touched. Of course we had to give some money to the parents.

HOSPITALS

Rhode Island Hospital.

Dr. William Holt, who has been one of the assistant superintendents for the past year, resigned on September 1st to become resident physician to the Phillips Exeter Academy, Exeter, N. H.

Dr. William Newton Hughes finished his term of service as interne on September 1st, and on September 8th was married to Miss Pauline A. Barrows at the home of her parents, 68 Keene Street. Dr. Hughes began practice in Manton on October 1st, it being his intention to specialize in neuro-psychiatry as soon as possible.

On October 1st, Dr. John A. Bolster completed his interneship and began a four months' term of service at the Providence Lying-In Hospital.

Dr. Francis V. Garside has been acting as assistant superintendent for the summer, and Dr. James F. O'Brien has served as substitute interne.

CASE REPORT

Mrs. M. H. R. admitted to Providence Lying-In Hospital unconscious. Patient was at full term and was stricken with convulsions ten hours previous to admission. Blood pressure was 200/70 and urine showed a large amount of albumen with many fine and coarse granular casts.

Vorhees bag was inserted and patient was delivered of a seven and three-quarters pound baby with the aid of low forceps at 9 A. M. Child gasped once but no heart beat could be felt or heard. Ten minims of adrenalin, 1-1000, was introduced directly into heart muscle and within a few seconds pulse was 96, regular and of good quality. Artificial respiration was instituted at once and in about ten minutes pulse was 120, respirations regular and child gave a weak cry.

1:30 P. M.—Nurse reported child was black in the face and apparently dead. No heart beat or breath sounds could be heard on auscultation. Fifteen minims of adrenalin was again injected into heart and in about fifteen seconds heart started to beat at the rate of 100 beats per minute. Child was immediately insufflated, mouth to mouth, and the cyanosis disappeared. Pulse now was 120.

4 P. M.—Child was reported as cyanotic again. Heart rate was 60, regular and of fairly good quality but slowing. Ten minims of adrenalin was administered and the cyanosis almost disappeared.

7 P. M.—Child was reported as cyanotic again. Ten minims of adrenalin was again given. Color improved but the effect was less than the previous time.

7:30 P. M.—Child was reported as white and motionless. Auscultation revealed no heart beat or breath sounds. Ten minims of adrenalin was given again, followed by insufflation and massage of heart but child never revived.

Thus, child was revived four times by the use of adrenalin and lived a total of ten hours and a half after delivery.

Earl A. Bowen, M.D.

SOCIETIES

The Rhode Island Medical Society held its Quarterly Meeting Thursday, September 6th, 1923, at 4 P. M., at the Medical Library Building, Providence. The following program was offered:

Papers: 1. Modern Italian Surgery. John W. Keefe, M.D., Providence. 2. The Clinical Application of some newer phases in Endometrial Pathology. Arnold Sturmdorf, M.D., New York.

Collation followed.

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ORIGINAL ARTICLES

"MODERN ITALIAN SURGERY."*

By John W. Keefe, M.D.

Providence, R. I.

Two voyages to Italy, one some seventeen years ago and the other about a year since, with a study of Roman history and of the lives of many of the great scholars, artists and heroes who have dwelt in that sunny clime, led me to enlarge upon some of my impressions, which I shall present to you today.

While many of us realize that travel is a most enjoyable method of acquiring useful knowledge and of broadening one's horizon; there is too great a tendency for most of us to defer our journey to some opportune time, and too often this ideal time never arrives.

We may read the works of noted teachers of medicine and undoubtedly they have value; but if we have had the opportunity to come in close contact with a man, hear him teach and see him operate in his home clinic, where he does his best work; we then may come away with some part of his magnetism, which has entered our souls and helps keep the fire of ambition burning within us, "For 'tis ambition keeps honour bright, to do is better than to have done."

We have often thought that the American student of medicine had many advantages over students in foreign countries that perhaps he seldom realized. In the first place the cosmopolitan character of our people, composed of so many nationalities, tends to remove feelings of prejudice, which we find so prevalent in European countries; for instance, a Frenchman's attitude towards a German and vice versa.

Scarcely a generation ago, the course of study in our medical schools was so brief that many of our young physicians went abroad for further study, that they might receive inspiration from the masters in medicine, irrespective of whether they were French, English, German or Italian.

This receptive attitude of mind, namely, to be willing to receive information, no matter from whence the source, regardless of race or nationality, gave broader scope to American medicine, which has already borne fruit.

It now appears that America bids fair to be the greatest center of medical teaching in the world and may some day rival the great schools of ancient times, such as Alexandria, Salicet, Bologna, etc.

Yet, it seems to have been ordained that no race has a monopoly of the brains that produce clear thinking.

History reveals the story of the lives of eminent scientists, poets, warriors and statesmen distributed among all types of people and in all quarters of the globe.

The science of medicine is deeply indebted to Italian thinkers, for keeping alive the teachings of three noted Greeks, namely, Aristotle, Hippocrates and Galen, masters of the art of healing.

The first great modern medical school was at Salerno, where, beginning with the tenth, medicine was taught for four successive centuries. It is to Italy also we owe the conservation of medical classics.

Something worthy of emulation by physicians of our own time is taken from the writings of Ruggiero Rolando, written during the latter part of the twelfth century. He wrote: "We have resolved to write out, deliberately, our methods of operation, such as they have been derived from our own experience and that of our own colleagues and illustrious men."

The celebrated University of Bologna at one time had a student enrollment of 12,000 and the University of Padua 8,000. Pisa was also one of this triumvirate of renowned universities, the illustrious teachers of these schools attracted scholars from all parts of Europe. Vesalius, the noted pioneer in anatomy, a Frenchman, did most of his anatomical work at Bologna.

The great Harvey was a student at Padua and freely acknowledged the debt of gratitude he owed to his Italian masters. Eustachius, Fallopius, Varolius and Malpighi also pursued their studies in Italy. Virchow states that Morgagni, an Italian,

*Read before the quarterly meeting of the Rhode Island Medical Society, Sept. 6th, 1923.

was the father of modern pathological anatomy and that his famous work, "The Seats and Causes of Disease," is worthy of study today by medical scholars.

Among some of the men who wrote clear descriptions of pathological conditions may be mentioned Montagnana of Padua, Savonarola of Ferrara, Arcolani of Bologna and Benedetti, who was professor of anatomy at Padua, Benivieni of Florence made dissections upon the cadaver with acute perception and accurate description; Malgaine says of him that "he wrote the only book on pathology which owes nothing to anyone."

Frascatorious wrote in 1546 his celebrated work called "De Contagione," in which his views coincide with the modern theory of infection by microorganisms. Guy de Chauliac, called the prince of surgeons, made his studies in Italy and published La Grande Chirurgie.

We are all familiar with the name of Prof. Bassini of Padua, who developed an operation for the cure of inguinal hernia, which has been employed all over the civilized world.

The city of Genoa is about the size of Providence, and the principal part of it is situated high above the sea, which gives one a superb view of the blue Mediterranean and the low-lying mountains to the north. The dwellings, public buildings and stores compare favorably with any city of its size.

One of the finest hospitals in the world, named from its foundress, Duchess Galliers, we may visit here, and take with us many valuable ideas as to hospital location, size, construction and practicability.

I am told that this philanthropic woman, the Duchess de Galliers, contributed an amount the equal of two million dollars to this hospital.

The hospital is built on a hill facing the city; as you approach the building, you will observe that there are five pavilions, each two and one-half stories in height, with a high studded basement. All the buildings are connected by corridors. The front of the hospital, instead of being in a straight line, is in the form of a crescent.

The kitchen is situated at the rear of the main building, so that no odors from cooking permeate the hospital. The food is placed in heated receptacles, which are loaded on a flat car that runs on a track, when the car reaches the center pavilion, a turntable switches it either north or south toward the four pavilions located on either side of the main building. Elevators take the food to the wards.

It seemed curious enough to see upon each enameled bedside stand, a supply of bread and a bottle of red wine which was the luncheon for the day. There are twenty-two beds in each ward, with special rooms at one end and a diet kitchen at the other end.

The operating rooms were especially attractive and unusual. A description of one may be of interest. Imagine an amphitheatre such as is usually found in hospitals, the arena of which, where operations take place, is completely surrounded with glass; the operator, his assistants and nurses, literally operate in a glass house. Visitors and students witness the operation through the glass protection; which prevents contamination of the atmosphere about the field of operation from the dust and bacteria which may be carried on the boots and clothing of the visitors. The surgery we witnessed was of a very high order and one case I recall that of a gastro jejunostomy performed dexterously, without the use of clamps.

The principal hospital at Florence dates from the thirteenth century, but one must remember that there are also modern buildings with every recent improvement adjoining the old building.

We witnessed Professor Berci perform two Bassini operations for inguinal hernia, the details of which were quickly and accurately carried out.

Milan impresses one as a large and busy modern city. Its famous Cathedral, ornamented with over a thousand statues, dominates the principal square.

An unusually large hospital, five centuries old, accommodates 3,000 patients. The oldest part of the hospital was originally a monastery and this building is in the form of a cross, thus making four large wards containing seventy beds each. The ceilings are thirty feet high, the window sills are seven feet from the floor and the windows reach nearly to the ceiling on both sides of these long wards, thus admitting plenty of fresh air, light and sunshine.

There is an altar at the intersection of the wards, which permits the patients occupying the beds of the four wards to participate in divine service. There are also seven modern pavilions, each containing four wards, and each ward thirty beds.

We shall next visit the eternal city, Rome, ever interesting because of its many monuments representing the life of past ages; the arch of Constantine, the Coliseum, the Pantheon, the Roman Forum, all of which recall the grandeur of the Roman empire. While there are several hospitals in Rome, the one most noteworthy and entirely modern is the Polyclinico, with more than 1,200 beds. This hospital might well serve as a model for hospitals in any country.

The grounds selected are extensive, which allows plenty of room for expansion. There is a central administration building, with four separate buildings, two and one-half stories high, on either side, connected by corridors. This arrangement permits the segregation of patients, so that we may have separate pavilions for medical, surgical, gynecological, orthopoedic, pediatric and other specialties.

Professors Bastianelli, Allesandri, Durante, Ferrari and their assistants have charge of four surgical pavilions with four hundred beds. During one year over 3,500 operations were performed on the surgical services. There are at present some twenty-two buildings on the hospital grounds.

Professor Bastianelli, a tall, slight, vigorous man of perhaps fifty-five years, is undoubtedly one of the great masters of surgery in the world. I spent a delightful and instructive day with Prof. Bastianelli in his private hospital, situated near the Polyclinico. Sisters of the order of Franciscan Missionaries of Mary have charge of the hospital, including the nursing. Everything about the hospital is ideal. The technic of the operating room was particularly good. The chief assistant here, as in many places in Europe, are men in middle life. The younger physicians are second or third assistants. The sister in charge of the operating room was very efficient and gave evidence of having been in charge a long time.

I saw Professor Bastianelli, who speaks English, perform two operations, and then he showed me about the hospital. His laboratory was well equipped and he employed young women as technicians. One of the operations was done for the cure of a large ventral hernia in a very obese woman. He made a long, transverse, elliptical incision, and removed a great quantity of adipose tissue. The fascia was overlapped and the flaps sewed together with mattress sutures. Benzine and iodine half strength U. S. P. or 3½ per cent, are used in preparing the skin previous to operating. The other patient had his leg amputated for gangrene, caused by diabetes.

Asepsis was carefully observed and the surgery was done with skill and precision. Next day, I spent with Professor Pestalozza at the Polyclinico, where he has charge of the gynaecological pavilion.

One of his assistants spoke English well, and explained many features of their methods. Professor Pestalozza operated for the cure of retroversion by a method I had never heard of. I wrote him on my return home, and he sent me a reprint describing his operation, which Dr. Corvese kindly translated for me. I have since added a method of shortening the round ligaments to be employed, in conjunction with Prof. Pestalozza's operation, which has proved effective.

We spent several days visiting hospitals in Naples, accompanied by Dr. Conca, who practiced in Providence for fifteen years.

One day we saw a surgeon about sixty-five years of age perform a Caesarian section in a deformed woman with kiphosis, narrow pelvis and also flexion and anchylosis of both hip joints. The surgeon wore white cotton gloves, he operated rapidly and within a minute had delivered a lovely baby boy. He made a transverse incision in the uterus, from one round ligament to the other. The wound in the uterus was closed with interrupted silk sutures. He was ably assisted by two surgeons, each one about twenty-seven years old, who were deeply interested and on the alert all of the time.

At another hospital, the Polyclinico, I saw some very excellent work done in the gynaecological pavilion, and made a visit to the wards and private rooms to see the results in cases previously operated upon. Some of the patients had their abdominal wounds dressed especially for us and all the wounds were healed by primary union.

With two of the resident surgeons, we examined about eight patients with abdominal masses, who were being treated previous to operation. There were cases of fibroids, ovarion cyst, salpingitis, etc. We noted with pleasure the completeness of the histories and the keen interest in their patients taken by these resident surgeons.

The hospital where Dr. Conca had served as an interne was very old and some of the wards con-

tained sixty beds. The operating rooms and a portion of the hospital were modern. We should bear in mind that many cases of elderly poor people are taken care of in the large wards of many of the old hospitals in Italy, where with us they are sent to an infirmary or poor house.

My stay in Naples was especially interesting and instructive, largely due to the kind offices of Dr. Conca. The hospitals of Italy are supported by grants from the central government and the city where the hospital is located, besides charitable bequests.

The University of Naples has about 3,000 students, and the University of Rome about 2,000.

I came away from Italy with the impression that the leading surgeons of Italy today compare favorably with the ablest surgeons of any country and are worthy of their ancient inheritance.

Remember that we can always learn something from the other man.

Contact with men who are masters in surgery, inspires one to higher ideals and stimulates one to work harder and, in consequence, do better surgery.

INFLUENZAL GASTRO-DUODENITIS WITH JAUNDICE.*

By A. M. Burgess, M.D.

Providence, R. I.

The term influenza is applied to an infectious disease or a group of related infections which has certain typical clinical manifestations. Of these, the headache, general aches and congestion of the mucous membranes of the upper respiratory tract are well known to the profession and laity alike—more especially because of the recent terrible experience of the whole world with the disease. The short course and the absence of leucocytosis are also characteristic. When the disease becomes pandemic in a virulent form, as in 1889 and 1918, it constitutes a very definite and easily recognized clinical entity. At other times the diagnosis cannot usually be made in such a positive fashion, as without the aid of a clear cut laboratory test the physician is forced to base his conclusions on his clinical examination only. To the mild cases such terms as grippe and "grippy colds" are commonly applied and when bronchial or pulmonary infection takes place the anatomical terms, bronchitis and pneumonia, often suffice without mention of the etiological factor. Many borderline cases exist which may or may not be true influenza and in every instance the clinician is quite entitled to his own opinion, as a means of proof does not exist.

In forming a judgment regarding the numerous cases of influenza-like infections that have been occurring almost continuously since 1918, one must be guided by his own clinical impressions, and considerable difference of opinion undoubtedly exists. For example, only a few months ago the writer noted one morning—in the lay press—a statement by our most distinguished superintendent of health to the effect that there were no cases of influenza in Providence; this at a time when the writer was seeing on an average of about two new cases of what he considered influenza every day. These cases, it is true, were many of them mild, and all were without pulmonary involvement, but a large proportion of them had typical and at times very severe symptoms at the outset. Bronchitis was, however, fairly common. In those cases in which a leucocyte count was made it was invariably found to be normal or low. In a small proportion of instances a continuation of the fever and cough was associated with persistent and numerous moist rales usually heard over one lobe of one lung, ordinarily but not invariably a lower lobe. Occasionally the bronchial involvement appeared to be primary and the symptoms of nasal and sinus congestion were entirely absent, yet the low white count, the short course and early backache or headache suggested that the infection was to be classed as influenza. All standard text book descriptions of influenza allude to the gastro-intestinal type. About two years ago there was prevalent in this community and elsewhere in New England a type of acute gastro-enteritis associated with fever, often, but not always, headache and general aches, and a leucopenia to which this diagnosis could, it seems, reasonably be applied.

Let me state my own impressions of the whole situation as applied to Providence. It has seemed to me that since the pandemic of 1918-19 influenza has been constantly with us in a milder, less typical and constantly varying form. The cases in the pandemic were for the most part true to type,

*Read before the Staff meeting of the Providence City Hospital, May 18th, 1923.

a most virulent infection with a marked tendency to pulmonary invasion. There appeared to be some immunity following the attack, as recurrences the same year were very rare and but a small proportion suffered a recurrence during the following year. During the next two or three years what appeared to be the same disease in a less virulent form was very common at times. Pneumonia was not very frequent. During the winter just past, influenza has, I believe, been of more frequent occurrence in this community than at any time since 1918-19, but it has been very mild. The infection at times has seemed to be limited to the upper respiratory passages, at times to the trachea and bronchi. The attacks have been short, but considerable debility has followed them. Recurrences have been very common, and even third attacks have occurred—suggesting that the disease has produced no lasting immunity. Furthermore, there has been a considerable increase in the occurrence of the type of complication which is the subject of this paper—gastro-duodenal infection.

During the past two years there have been reported throughout the country a large number of cases of mild contagious jaundice which at times has been of so frequent occurrence as to be called epidemic. (Blumer[1] has recently published a very interesting summary of the occurrence of this condition throughout the country. He, like most others who have studied this disease, is inclined to emphasize the jaundice as the main clinical feature, although he does refer to cases in which jaundice fails to appear. He also mentions the influenza-like initial symptoms. He was unable to find any evidence that organisms of the typhoid-colon group are a factor in producing this condition.) Tests of blood and urine have shown these not to be of spirochetal origin. As far as I am aware, no definite relation between these cases and influenza has been suggested, although I have heard them referred to by laymen as "flu jaundice." The cases mentioned in this communication are, I believe, of the same nature as those that have been observed and reported in the literature as above noted. In only one of the fifteen there is no record of an initial influenza-like attack and as this case was one of the earliest of the series it is probable, I believe, that the attack was not recorded because careful inquiry regarding it was omitted. All the fifteen were private patients treated in their own homes, and the records are compiled from notes made in the course of a very exacting clinical practice and are not as complete as could be desired. (I am indebted to Dr. E. S. Wing and Dr. DeWolf, who attended him, for the record of his own case. I saw him but once at the height of his jaundice.)

Based on observation of the cases here recorded a description of the average attack is about as follows. After what appears to be a mild or moderately severe "grippe" the patient notices that his appetite does not return to normal. Instead there is a period of increasing anorexia, sometimes beginning two or three days later. This is associated, as a rule, with nausea and epigastric discomfort. Vomiting and true epigastric pain may be present and there is almost always distinct epigastric tenderness. After an interval of from seven to fourteen days, during which the symptoms usually have slightly increased, jaundice appears. As a rule, within a day or two of the appearance of the jaundice the symptoms abate and the patient gradually returns to normal. The jaundice varies from a very slight conjunctival tinge lasting a day or two to a fairly completely obstructive type which lasts for two or three weeks. In many cases splenic enlargement is noted. A number of patients have been observed but are not reported in whom the whole picture as outlined above, that is, initial attack, progressive nausea, epigastric tenderness and at times splenic enlargement has been noted, but in whom juandice did not appear. In one or two of these a trace of bile was found in the urine. It is to be assumed that in these patients sufficient congestion of the duodenal mucosa to obstruct the outflow of bile did not occur.

TABLE I.

Case No.	Maximum Temperature in Initial Attack	Influenza-like Symptoms	Day on which Jaundice appeared	Nausea and Anorexia (with vomiting = ++)	Epigastric Tenderness	Leucocyte Count	Spleen Palpable	Days of Jaundice (approximate)
1.	?	+	?	+++	0	—	+	12
2.	101.2	+	8-10	+	Slight	1,666	+	14
3.	103.4	++	6	Slight	?	—	0	?
4.	?	—	?	+	Slight	—	+	?
5.	?	Slight	8	+++	?	—	0	?
6.	100.4	Slight	8	+++	Slight	—	+	10-14
7.	102	++	10	++	0	8,450	0	?
8.	100.4	Slight	4	Slight	0	—	0	?
9.	100+	+++	6	?	?	—	?	10
10.	102.8	+	5(+)	+	Slight	7,650	+	?
11.	?	Slight	9	Slight	?	—	0	7
12.	?	+	?	++	0	4,500	0	10
13.	103	++	4	++	++++	9,950	0	10
14.	?	+	15-17	++	+++	6,200	?	?
15.	103	+++	5	++	+	8,500	0	?

[1]Blumer, G., Infectious Jaundice in the United States, J. A. M. A. 81:353, Aug. 4, 1923.

Table 1 graphically presents a comparison of the clinical data in the cases studied.

Case No. 13 is of interest because of the severity of the symptoms, the acute epigastric pain requiring morphia and the tenderness and muscular spasm suggesting a surgical condition in the upper abdomen.

Brief reports of cases No. 14 and No. 15 are given on account of the complicating conditions and the bacteriological findings.

Case No. 14. Dr. E. S. Wing, 38 years, physician.

Previous history irrelevant.

December 1, 1922, patient was taken with a mild attack of typical "grippe" which lasted four days. After he had been up and about six days he noted a cloudiness in his urine and found on examination that it contained an apparently pure culture of motile bacilli. This was followed by backache and fever and the appearance of pus in the urine. A sharp febrile attack of typical pyelitis occurred, lasting from about December 10th to December 27th. During the course of this attack there was marked anorexia and nausea and on December 17th jaundice appeared. A leucocyte count at this time was 8,500.

Cultures from the urine yielded a bacillus apparently identical with that found in case No. 15.

A second attack of fever lasting from January 2d to January 7th occurred, due to pyelitis on the other side. Recovery was uneventful.

Case No. 15. D. S. B., student, 19 years.

Seen January 25th, complaining of acute headache and backache. Has had chilly sensations all day. Temperature 102.6. Pulse 84. Throat, marked redness. Conjunctivae injected. Diagnosis, influenza. Next morning this patient's temperature was 101 and he complained of epigastric aching. Definite tenderness was present in epigastrium. That evening (Jan. 26th) the temperature rose to 103 and the patient complained of severe abdominal pain all over upper and lower abdomen. He was transferred to Jane Brown Memorial Hospital. Seen the following morning, the patient showed definite spasm of right rectus. Pain had localized chiefly in right lower quadrant, where there was distinct tenderness. Temperature 101. Pulse 80. Leucocyte count 6,200. Diagnosis, appendicitis, acute—complicating influenza. Operation by Dr. E. M. Porter, with removal of an acutely inflamed appendix with fibrin on its surface.

Cultures from the appendix on Endo's media yielded many colonies identified as B. Coli and many typhoid-like colonies. From these there was cultivated a motile gram negative bacillus which responded to all the cultural tests for B. typhosus but failed to agglutinate with a strong anti-typhoid serum. January 29th—two days after operation, and six days after the initial symptoms, jaundice appeared. Epigastric tenderness was present. Spleen was not palpable. The jaundice persisted for about ten days and recovery was uneventful.

Comment: This case is reported because of the appendiceal infection with low leucocyte count which, with the gastritis and duodenitis seemed to be an extension and continuation of the original influenzal infection. Cultivation of an organism of the typhoid-colon group apparently identical with that recovered in case No. 15 is interesting.

Summary.

The foregoing report deals with a mild infectious disease which on the basis of clinical conjecture can, I believe, properly be classed as a variant of the prevailing influenza. Although mild, cases 13, 14, 15 show that it may be fairly severe. The intercurrent pyelitis in case 15 and the acute appendicitis in case 14—both associated with an absence of leucocytosis at the height of the symptoms, suggest the possibility that the original infection had been transferred to the kidney pelvis (case 15) and the appendix (case 14) metastatically by way of the blood stream. Cultivation of an apparently identical organism from these two sources may be of interest.

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EDITORIALS

THE RHODE ISLAND MEDICAL JOURNAL.

Some years ago, the date is of no consequence, the RHODE ISAND MEDICAL JOURNAL supplanted and took over the affairs of the Providence Medical Journal, since which time the Rhode Island Medical Society has, through its Committee of Publication, administered its course.

Certain men, at the time of this conversion, of literary bent, decided that a broader scope could be attained and a broader usefulness enjoyed by a state rather than a city publication and subsequent history has proven the justification of their decision and attitude. The trend of the JOURNAL has since been one of upward progress, if not in literary attainment, in substantial standing; it may be said that this result was not of spontaneous growth, however, but has been brought about because a certain small faction in the Rhode Island Medical Society had pride enough in and respect enough for the organization to work for and maintain this JOURNAL, that it might not perish, that the benefits derived from its publication, not

the least of which are our splendid exchanges—nearly fifty—without pausing to mention the dissemination of the Society news and many interesting medical subjects now discussed in its columns, should not be lost.

Being, therefore, a chattel of the Society, every member thereof should feel a paternal interest in the welfare of the JOURNAL; not entirely that it shall remain or be a self-sustaining publication; there are higher motives than that in the publishing of a medical journal, although its business affairs should be so conducted as to preclude the necessity of eleemosynary benefits, but principally that in its publication its motive should be the dissemination of literature of scientific value and medical interest, and of the state news as relating to our profession.

Every member of the Society is, therefore, in a way, responsible for the standing of the JOURNAL and its character; still more responsible are those more intimately connected with its publication; publishing even a small journal is a business enterprise and the responsibilities identified with it cannot be smiled away or ignored. To attempt the first is inane; the second exhibits a deliberate unwillingness, and in either, the good faith of the evader is, to say the least, susceptible to question. Personal convenience is of no significance in the discharging of an accepted obligation. It is achievement that counts.

THE PSYCHIC IN LOCAL ANESTHESIA.

It is not very long since the attention of the medical profession was directed towards anesthesia and its relation to the surgeon and the patient. Present day literature is now flooded with writings on the subject and one almost asks the question, How much shall I believe? One surgeon does all of his surgery under local anesthesia, another very little if any. It is conceded that certain patients, those not of the too nervous type, are more suited than others for operations under local anesthesia. And it is equally true that it is more successful in some professional hands than in others. Is there a psychic effect? Do some surgeons possess personal qualities which inspire confidence and cause the patient to be good and not worry, etc., etc.? It is of course quite natural that certain qualities inspire confidence—witness the enormous popularity of the charlatans and quacks. And it is also desirable that a physician be kind and sympathetic with his patients, but not too kind nor too sympathetic. And so it is with local anesthesia—the assurance that the surgeon will not hurt—and the fulfillment of this promise—this is the psychic element which is of the most avail. Now as to the advisability of the patient knowing about the operation and even seeing the field of operation. This may be a good thing, but we rather think not. Such an exhibition is only adding one more weight to an already over-burdened nervous system and serves no good purpose. Anesthesia varies with geographical localities. In the middle west gas oxygen and local anesthesia are used far more than in New England, and it might be thought perhaps we are rather behind the times. No one who has ever taken gas or gas oxygen will ever wish to take straight ether. Some of our local anesthetists, geographically speaking, have made national reputation by their use of gas before the ether, and given surgery an impetus the importance of which it is hardly possible to overestimate. In view of the large amount of work now being done elsewhere with gas oxygen, local anesthesia and the two combined, it is difficult to understand why these practices do not find more ready adoption and anesthesia given its proper attention and application.

Local application anesthesia has been of the greatest value in the development of dental surgery, and some dentists have acquired a skill in exodontia that is truly surprising. To inject a tooth without the patient feeling the insertion of the needle or the injection requires a knack that all operators have not acquired but brings fame and success to those who have. There can be no doubt but that in a short time local anesthesia will very largely supplant general anesthesia for exodontia.

For general abdominal work, we doubt if local anesthesia will ever supplant our usual methods. Those who have seen it used are not particularly impressed with its success, some of us would put it even more strongly. It is a wise surgeon who selects that method best suited to his case.

Most patients are quite sensible about accepting operation and going through with it. It is not often that they stipulate what anesthetic shall be used or show unwillingness to assist the surgeon and accept his advice. They have enough confi-

dence to submit to the operation and rarely question minor details. Meddlesome acquaintances make far more trouble than the patients themselves, both at the time of operation and during the after care. And so, as we have seen it, for a quarter of a century, the psychic stuff is resident largely in the minds of those who deal in that sort of fluff, who claim particular and peculiar insight into the human mind, whose diagnostic skill is uncanny in its precision and whose surgical dexterity makes them the only rational person to perform this or that particular operation.

Local anesthesia is a very valuable addition to the surgeon's work. It has a large but not universal application. It should be selected where practicable in those cases where general anesthesia is contraindicated or where it is not necessary. Combined with general anesthesia it is of great value in selected cases. It will never supplant general anesthesia except in a very few hands. Skill in its administration is very important, practice making the operator more successful in its use.

PHYSICIANS AND PUBLIC HEALTH.

Most physicians have looked upon public health measures and public health laws with little favor. The exceptions to this attitude have been physicians who are engaged in public health work and a certain number of broad-minded physicians who have vision and have been interested in promoting improved health conditions. The opposition seems to be based upon the fear that public health measures will encroach upon the physicians' income by the treatment of more and more people by salaried physicians paid by public or private funds and by the increase of charity patients treated in hospitals. It is perhaps fair to say that some physicians hesitate to take an active interest in public health because of aversion to personal publicity. On the other hand, there are a large number who are so busy or lacking in interest that they do not inform or concern themselves with matters of public health.

This lack of interest on the part of the physician is to be deeply regretted, both from the standpoint of the physician himself and the public at large. The belief that the health department is taking bread and butter out of their mouths is not true. How many physicians stop to consider the number of medical and surgical patients who are sent directly and indirectly to them each year? The health department is constantly telling school children to consult the family physician. It is true that some children are treated free when their parents could pay but will not. Why should the children suffer from neglect because the parents refuse to meet the expense? Where one case of this kind occurs many patients are sent to the doctor by the health authorities which would never have consulted him otherwise. One bit of present public health propaganda alone will greatly benefit physicians, namely, to get people to go to their doctor at least once a year for routine examination.

It is only within the last two or three years that the House of Delegates of the A. M. A. have taken any active interest in public health measures. Out of this interest only one good thing has resulted and that is the publication of a popular medical journal. There has never been any more important piece of constructive work if the public can be induced to read Hygeia. But there are many other things which the House of Delegates and each state society can do to help guide, either to encourage or discourage the enactment of public health laws and practices. On their part, they must, however, be broad-minded, far-seeing and not dominated by selfishness. Selfishness can never be layed at the door of the physician, until recently there has developed among a few men the possibilities of commercialized medicine, instigated largely by large surgical fees. The temptations of large surgical fees are leading many young men astray and creating great dissatisfaction among general practitioners. Such a spirit should be curbed by state medical societies, which should have active committees, both on public health matters and matters concerning the proper qualifications of general surgeons and surgeon specialties.

In the last analysis physicians must take care of all the sick whether rich or poor. Some of their work is a charitable contribution and his paid fees must make up for the time spent on patients too poor to pay. The doctor deserves a good income if he is capable. If there are enough physicians and a small enough amount of charitable work to be done, then each physician will not miss time spent on charity patients but will profit by doing his reasonable bit. On the other hand, if charitable work is too heavy, then some physicians should be paid for it.

The American doctor is faced with possibility of state medicine. It will avail little for him to rail against its coming unless he has a feasible and efficient plan which will provide good medical service to everybody, rich or poor. It is perhaps too late now to prevent something of the sort being brought about, for public health measures have caught the fancy of the laity and much legislation is being put through and will be put through whether the doctors like it or not.

ONE THING WE LACK.

Chief among the factors that keep Rhode Island "off the map" medically, that prevents the development of leaders in the profession and the recording of work of unusual and permanent value from our clinics, is the lack of teaching opportunities for our clinicians and laboratory workers. There is nothing that keeps a busy man so permanently "on his toes" as the association of a teacher with younger men who are ever alert and enthusiastic and as a rule so well informed that the instructor must constantly do his best in order to keep ahead of them. Successful teaching of the various clinical branches requires a large number of patients, "clinical material," as we sometimes almost inhumanly term it, such as is offered only in the wards and outdoor departments of the larger hospitals. Such teaching not only benefits the student and instructor but invariably raises the standard of work done in the hospital and the university. The successful medical school must be associated with large hospitals. The large hospital not associated with a medical school and in which teaching is not done suffers, its work is invariably of an inferior quality and the community suffers in consequence. This condition obtains in Rhode Island.

In New England, exclusive of Boston, there are well known medical schools, each a department of a university. In none of these communities are there hospitals as large or as rich in the variety of "clinical material" as are the hospitals of Providence. Many Providence clinicians have had the best of training and a number have had teaching experience. We have the hospitals, we have the men, we also have the University.

THE MEDICAL PRACTITIONER AND THE AMERICAN SOCIETY FOR THE CONTROL OF CANCER.

By J. E. Rush, M. D.

Field Director American Society for the Control of Cancer.

Among the most important public health problems confronting the medical profession today is that of cancer control. It is possible to make a division of public health movements into several groups, depending on the amount of educational work which must be carried out before the program can be successful. In one group we find such diseases as typhoid fever, malaria and yellow fever, which may be controlled simply by educating a few individuals who possess the necessary power in a community to place the program in operation after they have been shown the desirability of such a procedure. This type of activity is relatively simple because it depends upon the education of a few individuals. Unfortunately, the diseases that can be controlled in this manner are among those which usually do not exact from the populace the greatest economic toll.

Another group of diseases may be effectively dealt with through police power and here again we depend on the education of a few members of any given community. For the most part the diseases which may be controlled by this means we refer to as "communicable" and usually they can be very effectively dealt with by placarding, isolation and quarantine.

There is another group of diseases which are not communicable and in which the education of but a few members of the community is not sufficient to affect the mortality rate. Here we find cancer, which depends for its ultimate control upon the education of every single adult of the community, with reference to the early signs and symptoms of the disease, for only in its early stages is cancer curable. With the present attitude of the public to seek medical advice only when they are aware of distressing symptoms, they must be told that early cancer is usually painless and that proper treatment cannot be instituted until they have sought the advice of a physician.

The medical profession is interested in all types of medicine whether preventive or curative. As a matter of fact, there really is no hard and fast

line of demarcation between preventive and curative procedures any more than there is a dividing line between the metals and the non-metals. The medical profession is interested in all problems of public welfare but when it comes to matters concerning public health they are the only ones who through tradition and training are capable of handling the problems which present themselves for solution. It is the only profession at the present time that is engaged in real preventive medicine and it is the profession of election for this type of work. Usually public health movements have been initiated by the medical profession but in many instances the work has passed into the hands of the laity because the members of the medical profession have been preoccupied with other important problems.

What we have said with regard to the attitude of the medical profession towards public health work clearly emphasizes the need of control by the medical profession of all public health movements. The profession is particularly interested in the problem of cancer control not only because it is of great humanitarian interest but because of the further fact that cancer is one of those conditions in which it has been clearly demonstrated that the medical profession is the only one capable of offering a solution. While sanitary engineers, epidemiologists and others may be of great value in the conduct of specific public health movements, their training and experience does not make them capable of helping in cancer control. The slogan of the American Society for the Control of Cancer, that "Early cancer is curable if you will consult your medical practitioner in time," again clearly emphasizes that the physician is the only one capable of reducing the mortality from cancer.

Another interesting feature of the movement for cancer control is that the establishment of diagnostic clinics during National Cancer Week is of some educational value to certain members of the medical fraternity because important points of differential diagnosis between early carcinoma of tongue, for example, and primary luetic ulcer, are demonstrated. The cancer movement in this respect is one of the few that attempts to repay the physician for the great effort he has expended in its behalf.

It has been claimed by some of the unthinking individuals among the laity that preventive and curative medicine are diametrically opposed. They do not realize that there is, in the last analysis, but little difference between preventive and curative measures. For example, all physicians take blood pressures and make urine analyses during the course of a pregnancy and not by the wildest stretch of the imagination can this be interpreted as a curative measure—it is a preventive measure pure and simple.

Through various educational movements which are now being conducted to instruct the public with regard to conditions which are definitely preventable, the great mass of the people are gradually coming to realize that the physician must be looked upon as a teacher and advisor rather than one who is to be consulted only when symptoms of a diseased condition have manifested themselves. The physician, too, realizes that this teaching attitude is appreciated by the public, for by this means he is able to prevent premature deaths among his clientele. Not only does he spare the patient in question for future usefulness, but, more important, he does not divorce the rest of the members of that particular family. The physician realizes that the most appreciative patient is one who, through early advice and proper instruction, has been saved from untold suffering and an untimely death.

All health movements if properly managed and ethically controlled by the medical profession will not only eliminate certain objectionable features present in some of them as now conducted by the laity (who have no appreciation of medical ethics) but such activities will help consolidate the medical profession against the ever increasing influence of the cults. It is true, that we as a profession, do not heartily approve of certain public health movements now in progress, because they do not conform to our ethical code. If they were controlled by the medical profession this objection would be removed.

It must be realized that the cults never would have existed had the medical profession taken a definite stand against them, but realizing that "Imitation is the sincerest flattery," we have allowed them to go on, to exploit the public until even the great mass of the people has recognized the lack of sincerity which prompted the various movements.

The proper extension of these ideas relative to organization in order to control public health prob-

lems contains within it the answer to the proponents of that most preposterous type of activity known as "State Medicine."

The organization for cancer control is dependent upon the activities of the medical profession; and therefore the units upon which the organization is built are the State and County Medical Societies. The whole movement has been endorsed and approved by practically all national, sectional, state and local medical and surgical bodies, because it is entirely controlled by the profession itself. In the perfected organization for cancer control, we have the ground work to handle other problems of a public health nature; be they ones already in existence or future ventures. By proper organization, too, we shall be in a stronger position to abort detrimental legislation, whether directed at us or to legalize the ignorant cults. A public health problem directed solely by physicians will do more to properly organize the medical profession than any other type of activity.

It has been pointed out that if we do not seriously consider the "scientific attainments" of the cults, then every preventable death is a reflection on us. It has been claimed that the fact that the patient did not come early enough to us for examination and advice is no excuse; that we, as the only logical profession engaged in the practice of the healing art should have the undivided confidence of the public to such an extent that they will report to us what are very trivial matters and thus give us opportunity to institute proper procedures in time. In the vernacular of the street, it has been suggested that we should "sell ourselves to the public"; which, in other words, means that there is at the present time a great need of ethical publicity on the part of the profession. It really seems that this would, to a very great extent, increase our usefulness to the community in which we practice. If this is true, then no physician can be so busy that he cannot devote a small amount of time to help in the campaign for cancer education, because by so helping, he is not only advancing his own usefulness to his community but is of the greatest value to his medical brothers and to his profession.

A few members of the laity have explained what they have interpreted as apathy on the part of certain of the medical profession toward preventive medicine, by emphasizing the fact that preventive medicine was diametrically opposed to curative measures. We of the medical profession realize the fallacy of this. Let us consider an analogy from the field of engineering. Suppose that ten engineers were bidding on a contract to construct a road between two adjacent cities. Only one could be successful; but would the others put obstacles in the way to prevent him from completing his task? The answer is apparent. They would not; for they would realize that when the public had seen the value of this road, they would demand similar ones in all other directions and hence the other engineers would have an opportunity to build some of them. I realize that the above example compares a business conducted purely for monetary return, to a profession which interests itself chiefly with humanitarian efforts, but the very few of the public who believe that all persons are actuated by ulterior motives should be answered. The good roads analogy applies directly to medicine, for the medical practitioner realizes that each time the public is convinced that it is unnecessary for them to suffer with various ailments they demand the removal of others which heretofore they patiently tolerated. An example may illustrate this point:

A friend of mine who for many years was almost an invalid from recurrent attacks of what was then diagnosed as "inflammation of the bowel" and for which, at that time there was no known cure, was simply forced to allow the condition to exist which undermined his health and lowered his efficiency. At the present time because of the knowledge of the laity concerning chronic appendicitis he would know that an operation requiring him to be at a hospital for but two short weeks would give him complete relief and enable him to resume his life's work at a greatly increased efficiency.

Our medical ethics instituted at the time of Hippocrates admit of no change; but our interpretation of them may be broadened to meet the changing conditions; especially those which have been brought about during the past two or three decades. It may be necessary to change our ideas regarding proper non-personal publicity for the medical profession as a whole and for our state and county societies. In this connection I am reminded of the story of the young color-bearer at Gettysburg who had advanced somewhat ahead of the lines, and when ordered back to his position by his commanding officer replied, "Bring the line up to the flag."

CASE REPORTS

Two Cases of Anthrax.

C. C. Dustin, M.D. R. S. Buol, M.D.

Providence City Hospital.

Case No. 1.

On July 24th a male white butcher of 57 years disposed of the carcass of a cow that died from splenic fever or anthrax. No precautions to protect the hands were taken. On July 27th he noticed a small vesicle on the dorsal surface of the right hand over the fleshy portion between the first and second metacarpal bones. Three days later this small vesicle had increased in size and the hand began to swell. The patient was seen by a surgeon, who found large Gram positive bacilli growing in long chains. A diagnosis of malignant pustule was made and the patient was sent to the Providence City Hospital. Here the laboratory findings were confirmed. The lesion was about 2.5 cm. in diameter with a great deal of edema of the hand and wrist. The central portion of the lesion was covered by a leathery black crust and this was surrounded by a ring of vesicles, some of which had been broken. A great deal of sero-sanguinous exudate was being discharged.

The physical examination was negative and the temperature, pulse and respirations were normal. The hand caused very little discomfort. On the following day after sensitization tests anti-anthrax serum was given, 50 cc. intravenously, 40 cc. intramuscularly, and 10 cc. were injected at 3 points about the lesion. Local hot dressings of boric acid solution were applied. Twelve hours after the first serum was given the hand and wrist were considerably more edematous and a band of lymphangitis extended from the wrist to the axilla along the medial aspect of the arm. The axillary lypmh glands were enlarged and tender. The temperature was 98.6 F.

Fifty cc. of anti-anthrax were given intramuscularly and as there was considerable local pain all the other serum treatments were given intravenously. Every 12 hours 50 cc. of anti-anthrax serum were given intravenously until 250 cc. had been given, making a total of 400 cc. given. After the third day in the hospital the lymphangitis and local edema began to subside and the lesion gradually healed. No reaction from the serum was experienced other than a moderately severe urticaria which appeared five days after the last intravenous treatment. This responded readily to the subcutaneous injection of 1 cc. of 1-1000 adrenalin. The patient was discharged well on the 30th day after admission.

Case No. 2.

This patient, age 28, is the son of patient No. 1, and autopsied cattle with splenic fever the same time as case No. 1.

September 22nd, 1923, the patient noticed a bright red papule on the fexor surface of each wrist. The following day a physician burnt these with carbolic acid, but the lesions soon became more active in appearance, and the patient came to the City Hospital four days after the onset.

The patient on admission complained of fever for the past three days and headache of one day's duration. Temperature, pulse and respiration were normal. Physical examination was negative except for the local condition. The lesion on the left wrist was a dusky red papule about 1.5 cm. in diameter with a central eschar covered with a sero-sanguinous discharge and surrounded by an area of swelling and erythema that was not painful to pressure. Direct smears were taken from this lesion and a stab culture into veal infusion agar was made. The lesion on the right wrist was a vesicle upon a base about .5 cm. in diameter with a dark center, and had no erythema about it.

September 26th, 1923, the day of admission, the patient was given 50 cc. of anti-anthrax serum intravenously, 40 cc. intramuscularly and 10 cc. subcutaneously at 3 points about the lesion on the left arm. There was a band of lymphangitis extending from this lesion to the elbow. Hot bichloride dressings 1-10,000 were applied locally to both wrists and have been continued. A few hours after the serum had been given the temperature went to 102, pulse 98, respirations 30—probably due to serum reaction.

September 27th the left arm was swollen and edematous. The lesion of the right wrist showed little change, temperature 100, pulse 95, respiration 25. Fifty cc. of anti-anthrax was given intramuscularly and 50 cc. intravenously, none given subcutaneously.

September 28th, temperature, pulse and respiration were normal and have remained so. Inflammation about the lesion of the left wrist sub-

siding. Patient very comfortable, with no complaints.

On September 29th and 30th, 50 cc. of anti-anthrax serum were given intravenously. Intramuscular injections were discontinued because of pain caused by the two previous injections.

October 2nd, all signs of inflammation on the left forearm gone. Lesions on both wrists shrinking in size.

October 4th a serum rash appeared on body—eight days after the first serum was given. This caused no discomfort and no rise in temperature.

October 5th the patient was allowed up and the next day allowed out of doors.

October 12th: The lesions are markedly reduced in size but the central eschar still persists and is firmly attached by a pedicle. Patient is waiting for this eschar to work off before discharge.

Bacteriology. The smears taken on admission showed large, square ended, Gram positive bacilli singly and in chains. The stab culture showed the same organism and streptococci.

TWO CASES OF VAGINITIS CAUSED BY FOREIGN BODY.

I. H. Noyes, M.D.

(From the Gynecological Service of the Providence City Hospital.)

Case 1.

A girl, 10 years old, was brought to the hospital in June, 1923, because of a profuse vaginal discharge. She had been "boarded out" for three years until seven weeks prior to admission, when she was removed to the home of a relative.

The story related by the patient was that she had frequently been assaulted by a man in the house where she lived. In view of this and the profuse discharge, it was thought on admission that the child might have gonorrhea. A stained smear was reported "suspicious" and appropriate treatment was ordered by the interne.

Examination a few days later showed some purulent discharge about the vulva and inflammation of the mucous surfaces surrounding the introitus. On inspection of the vaginal orifice, a dark object was noticed in the upper anterior portion of the vagina. When grasped, this proved to be the end of a safety-pin which measured one-half by two inches and, from its appearance, had been in the vagina for at least several weeks.

Further treatment was omitted except for external cleansing and dusting with boric acid. The discharge disappeared entirely during the next few days and did not return, though the child was under observation for a number of weeks.

She persistently denied any knowledge as to when or how the safety-pin was placed in the vagina.

Case 2.

A girl, aged 15, was referred to the Out-patients' Clinic in August, 1923, because of a profuse foul vaginal discharge of two weeks' duration. She claimed to have been assaulted by her step-father some two years before. Later she developed signs of secondary syphilis and received treatment in another department of the hospital.

Examination of the external genitals showed no evidence of infection of Skene's or Bartholin's glands. Upon introducing a speculum into the vagina, a grayish object was noticed in the vault. This was grasped and removed, when another similar mass was seen. Each was soft and covered with a foul discharge and, when more closely inspected, was found to be a wad of toilet paper.

The cervix and vaginal vault were reddened and bled easily when sponged. Stained smears taken from urethra and cervix were negative for gonococci and within a week all evidence of vaginitis had disappeared.

No credible story could be obtained as to when or why this material had been introduced into the vagina.

INTERESTING CASE

L. L. Albert, M.D.
Central Falls, R. I.

One of the most interesting phases of modern life, rarely met in the United States, but common in Portugal and in the Cape Verde Islands, is the problem presented by the intermarriage of black and white. The offspring may be pure white, African black, or mulatto.

With the great influx of immigration to Rhode Island from the Cape Verde Islands came this problem.

The writer has an extensive practice among immigrants from this territory and in his practice

has witnessed many unusual results of intermarriage, but the most remarkable case came to his attention a short while ago in Pawtucket. A white Portuguese woman married a colored Brava, who came from the Cape Verde Islands. Their first offspring was a boy, who was a pronounced blonde. It is, however, the second pregnancy that produced the unusual case. The woman bore twins, a girl and a boy. The girl, who was born first, is a blonde, while the boy is black.

Multiple pregnancy may arise from one or more ova in a single uterus, from two or more ova impregnated in a double uterus or from one ova or more in the uterus and one extra-uterine.

In this case, we have a case of superfecundation, where there is an impregnation of one ovule after one has been already impregnated, or the fertilization of one ova of the same ovulation at a second coitus after one has been already fecundated.

In superfecundation, the children may or may not differ, and two children born at the same time may differ. It may also happen as a result of superfecundation that twins born with different physical peculiarities may have different fathers.

What the true state of facts in the aforesaid case that led to the superfecundation is, will remain a mystery, but the solution of it would be interesting.

SOCIETIES

Rhode Island State Medical Society

The regular quarterly meeting of the Rhode Island Medical Society was held at the Medical Library, Providence, Sept. 6th, 1923, at 4 P. M., the President, Dr. Arthur T. Jones, presiding.

The minutes of the preceding meeting were read by the Secretary, and approved.

The program was as follows:

1. "Modern Italian Surgery," by Dr. John W. Keefe, Providence. This paper was based upon the author's recent trip to the hospitals of Italy, and recounted in an interesting and entertaining vein the degree of skill shown by the past and present Italian school of surgery; a description of many of the hospitals and interesting anecdotes concerning several well known Italian operators. Discussion of the paper was made by Drs. Corvese, Chapman, Brown and Ventrone.

2. "The Clinical Application of Some New Phases in Endometrial Pathology," by Dr. Arnold Sturmdorf, New York. The essayist stressed the newer conception of the function and physiology of the endometrium and especially the role played by the lymphatics in the extension of infections from the lower to the upper genital tracts. Discussion of the paper was made by Drs. Hussey, Noyes, McCann, Jones and Keefe.

After adjournment a collation was served.

J. W. Leech, M.D., *Secretary*

Providence Medical Association.

The regular monthly meeting of the Providence Medical Association was held at the Medical Library, 106 Francis Street, Monday evening, October 1, 1923, at 8:45 o'clock, with the following program: Three cases of fracture of the forearm treated by open reduction, Dr. A. A. Barrows. Discussion was opened by Dr. Roland Hammond. Tuberculous glands of the neck, Dr. F. G. Hussey.

The Standing Committee approved the applications of the following men: Dr. John H. Brothers, Dr. Francis B. Sargent, Dr. Henry McCusker, Dr. Earl A. Bowen, Dr. George W. Waterman, Dr. Charles H. Gannon, Dr. Maurice Adelman, Dr. Owen L. Murphy. Collation followed.

Dr. Peter Pineo Chase, *Secretary*

R. I. Ophthalmological and Otological Society.

The annual meeting of the R. I. O. & O. Society was held at the Wannamoisett Country Club Wednesday, Sept. 26, 1923, the Society being the guests of retiring President, Dr. Howard E. Blanchard.

At 6:30 P. M. the members present sat down to a delightful chicken dinner, "a la Wannamoisett," which was certainly enjoyed by all.

To Dr. Blanchard a rising vote of thanks was extended for his very cordial hospitality.

The annual election of officers followed the dinner and the following officers were unanimously elected for the ensuing year: President, Dr.

Nolton Bigelow; Vice-President, Dr. Frank M. Adams; Secretary and Treasurer, Dr. Jeffrey J. Walsh.

The minutes of the previous meeting were read and accepted.

Under new business, it was voted to pay the usual twenty-five dollars to the R. I. Medical Library Building Fund and to buy the usual eye, ear, nose and throat journals for the Medical Library.

Motion moved and seconded that chair appoint a committee of three members to consider the advisability of making recommendations to the State Board of Public Roads, regarding a visual acuity test for automobile operators, with authority to act if occasion arises, and to report back to the Society at the next meeting.

Moved and seconded that the Secretary be appointed a member ex-officio of this committee, which comprises the following members: Dr. F. J. McCabe, Dr. J. F. Hawkins, Dr. W. C. McLaughlin.

Meeting adjourned at 8:30 P. M., the next meeting to be held at the call of the President.

JEFFREY J. WALSH, *Secretary.*

HOSPITALS

The regular monthly meeting of the Memorial Hospital Staff was held on October 2, 1923, with a large attendance present.

A demonstration of a lung motor was given by Mr. Frey, through the courtesy of the Blackstone Valley Gas & Electric Company, showing how the lung motor will take the place of the pulmotor. There was a discussion by Dr. Arthur T. Jones, Providence, R. I.

JOHN F. KENNEY, M.D., *Secretary*

NOTES

A ready, not to say eager, response was evidenced by the members of the Rhode Island Medical Society upon the receipt of the following:

"The President of the Rhode Island Medical Society extends to you a cordial invitation to be present at the Medical Library building on Saturday evening, September twenty-second, at eight forty-five o'clock.

"Dr. Robert Emmett Farr of Minneapolis will present a paper on 'Surgery Under Local Anesthesia' and show motion pictures of major surgical operations.

"Dr. Farr stands pre-eminent in America in the development of local anesthesia, and his book on this subject, recently published, is a masterpiece."

The meeting was largely attended and the various schemae and pictures so graphically shown was conclusive demonstration of what may be done by one who has the temerity and aggressiveness to evolve his convictions. We congratulate Dr. Farr. We may also emphasize the fact that the Society should feel indebted to Dr. Jones for the instructive pleasure he has given us.

MISCELLANEOUS

FAULTY FOOD IN RELATION TO GASTRO-INTESTINAL DISORDER.

The thesis is propounded by Robert McCarrison, London, England *(Journal A. M. A.)*, that much of the gastro-intestinal disorder of civilized peoples of the present day is due to faulty food. He presents evidence of the incidence of such disorder among civilized communities and of its comparative absence among certain races living under more natural conditions; and contrasts, in general terms, the food habits of the former with those of the latter. He refers to the special relation of perfect food to the functional perfection of the gastro-intestinal tract; and from these sources advances presumptive evidence of the effects of faulty food in impairing the functional perfection of the digestive system. Experimental evidence of these effects is given, and attention directed to the applicability of the experimental results to the genesis of certain acute and chronic gastro-intestinal disorders. McCarrison asserts that faulty foods capable of causing similar effects in man to those produced experimentally in animals are widely made use of at the present day. In guarding the national health, McCarrison says physicians have three obvious duties; the first, to instruct the masses as to what to eat and why they eat it; the second, to apply the results of science to the production of natural foods in abundance and to their widespread and cheap distribution, rather than to the erection of institutions for the treatment of maladies due to their want; the third, and most important, ardently to pursue investigations and the acquirement of knowledge.

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ORIGINAL ARTICLES

THE CLINICAL APPLICATION OF SOME NEWER PHASES IN ENDOMETRIAL PATHOLOGY.*

By Arnold Sturmdorf, M.D.F.A.C.S.
New York

When Virchow proclaimed that the presence of a round cell infiltration in any given tissue is the positive and invariable evidence of an inflammatory process, he implanted the prevailing conception of endometritis as a pathological and clinical entity.

Kundrat, in 1873, first opposed this dogma by demonstrating a round cell infiltration in all normal endometria, but it was not until 1908 that the investigations of Hitchman and Adler substantiated Kundrat's contention, recognizing the round cell infiltrate as a normal cyclic, menstrual phenomenon.

These investigations furthermore established the "plasma cell" as the true criterion of an inflammatory process and thus demonstrated the marked if not absolute immunity of the corporeal endometrium to chronic infections; so that the term chronic endometritis, for clinical purposes at least, can be safely relegated to the limbo of the obsolete.

Terminology dominates concept and concept determines practice, and thus we find at the present day, the secretory, menstrual and reproductive disturbances still too frequently categorized as chronic endometritis, with its inevitable therapeutic sequence of tampon, escharotic and curet.

The invariable failure of these established methods offers the most convincing evidence of the incorrect and inadequate knowledge of normal and pathological fundamentals which prompt their use.

In discarding chronic endometritis as a pathologic entity, the question naturally arises—how are we to explain the disturbances of secretory, menstrual and reproductive functions in the endometrium?

To correlate this symptomatology with its pathology, demands a complete revision of current conception of the uterine structure and its dynamics, which I can only touch upon in sketchy outline here.

The specific functions of the uterus in menstruation and gestation demand a wide range in the control of its blood supply and, like the heart, the uterus automatically responds to its fluctuating circulatory necessities, by rhymic contractions and dilatations, not only during pregnancy, but throughout its functional existence. (Henricius, Lieb.)

The myometrium is composed of smooth muscle fibers, which, like all nonstriated muscles, exhibits the intrinsic phenomenon of rhythmic contraction, independent of any neurogenic stimuli. Not only are these contractions necessary in maintaining the nutritional and functional integrity of the uterus as a whole, but they also serve the equally essential purpose of drainage: the cervical secretions must find free egress from the normal and more especially from the diseased conditions of its mucosa.

Under normal conditions, such drainage is effected, not merely by a passive outflow through a patent os, but by the active rhythmic expression resulting from uterine contraction.

To comprehend this mechanism, it is necessary to dispel the anatomic myth of a cervical sphincter; such a sphincter would imply the existence of a concentrically contracting muscular ring; the structural design of the cervical musculature precludes any concentric closure of its outlet which dilates with every uterine contraction, because its fibers, directly continuous with those of the corpus uteri, do not at any point completely encircle the cervix, but are disposed in a serried succession of oblique circle segments, which, by contracting spirally upward, necessarily shorten every diameter of the uterus, and by their uncoiling in the cervix widen the os like an iris diaphragm in a microscope.

In the cervix, as elsewhere, every infection incites the greatest reaction in its lymphatic system.

The cervical lymphatics may be traced from their lacunar origin in the mucosa, through mi-

*Presented by invitation before the Rhode Island State Medical Society, September 6th, 1923.

nute funnel-shaped ostio, directly to the muscular coat, where they expand into an extensive capillary net which, spreading along the perimysium, enmeshes every fascicle and bundle of the uterine musculature to the peritoneal surface, whence they drain into their collecting channels at the base and top of the broad ligament. (Leopold.)

Thus the normal course of the lymphatics conveys an infection from the cervical mucosa, *not to the corporeal endometrium,* but along the intramuscular planes of the uterus, as an ascending lymphangitis, which impairs uterine contractions by infiltrating the muscle sheaths; then progressing to the periadnexal ramifications, it inhibits tubal peristalsis and agglutinates the fimbrial ostia by the production of velamentous bands: finally reaching the ovaries, it infiltrates their tunica albuginea, impeding the normal rupture of graafian follicles.

It is this ascending intramuscular lymphangitis and periadnexitis, with its resultant impairment of uterine, tubal and ovarian functions, *not an endometritis,* that links the pathology and symptomatology of chronic endocervicitis.

I would characterize the cervical mucosa as the uterine tonsil. This pathogenic parallel finds its applicability when chronic endocervicitis is recognized as a primary infectious focus and its systemic symptoms as toxic manifestations: the ambiguous category of the hypothetic "reflex neuroses" is thus brought within the objective range of the toxicoses along modern lines of clinical research.

The enormous resorptive capacity of the uterine lymphatics is evidenced in its gravid and puerperal state.

We have learned to recognize systemic manifestations from primary septic foci in the mouth, the gall-bladder, the appendix, the urethra, etc.; why not from the cavity of the cervix? Why term a symptom toxic there and neurotic here?

Who still believes that the cephalalgia accompanying uterine disorders, the classic "*clavus uterinus,*" is due to "pinching of nerve terminals by cicatrices in the angle of a lacerated cervix"? Neurosis is the label, but toxis is the factor.

Infection of the cervix frequently dates back to a "vulvitis" of early infancy; this significant fact illuminates many of the gynecologic disturbances in virgins.

Hess reports the postmortem findings in four infants that had the usual nonvirulent form of vaginitis during periods ranging from "three weeks to one year or more," in all of which the only abnormal condition and sole lesion was an inflammation of the cervix with round cell infiltration of its submucous tissue. On the basis of these findings, Hess concludes that "we must regard the average gonococcus infection, as involving cervix rather than the vagina and must consider the infection a cervicitis rather than a vaginitis."

In adult females, Menge estimates that "95 per cent of chronic gonorrheal infections are located within the cervix."

While the gonococcus is by far the most frequent provocative organism of chronic endocervicitis, streptococcic, staphylococcic and colon bacillus infections are not at all infrequent findings in the order named.

In infants, the exanthems and especially scarlet fever, protracted diarrheas with probable contamination from soiled diapers, and general debilitating conditions seem to confer a special susceptibility to cervical infection, while in adults, congenital maldevelopment of the cervix, more especially when traumatized by cauterizations, dilatations, curettage or birth lacerations, embody the most prolific predisposing factors to chronic endocervical disease.

The course of chronic endocervicitis is insidious, and its symptoms vary within a wide range, depending on the intensity and progress of the infection.

Mild cases, limited to the superficial layers of the cervical mucosa, will present a leukorrhea as the only symptom, not necessarily copious or purulent, but intractable.

The sterility of women with conical cervices is never due to the cervical malformation, but to an existing endocervicitis. Huhner and Reynolds have demonstrated the direct devitalization of spermatozoa by diseased cervical secretions. The same applies to the postpartum sterility in lacerated cervices.

The dominating pathologic factor that determines the morbidity of a cervical laceration is not the extent of the tear but the incidence of its infection. Such an infection does not remain limited to the lacerated area, but sooner or later involves the entire endocervical mucosa from the external to the internal os.

In the progressive cases, the ascending myometrial lymphangitis inhibits uterine contractions, the blood current in the valveless veins, deprived of its essential *vis a tergo,* is slowed, and the resulting circulatory stasis augments the menstrual flow in the nonpregnant (menorrhagia, metrorrhagia), or impairs decidual evolution in the pregnant with premature expulsion of conceptional products.

The tubal fimbria may become agglutinated and thus establish a barrier to fecundity, while the impeded rupture of graafian follicles through the thickened ovarian tunic will delay the periodic onset of its menstrual term (amenorrhea).

Without extending this detailed analysis beyond the enumerated cardinal manifestations, it would appear sufficiently evident, that the whole symptomatology, the complications and sequelae of chronic endocervicitis, may be readily predicated from its pathologic course as outlined.

The diagnostic features of chronic endocervicitis are typical and plainly evident on inspection: the nullipara complaining of dysmenorrhea and sterility with her conical cervix presenting an inflammatory halo encircling a small pouting os, extruding a tenacious clump of mucus; the lacerated cervix of the parous woman, with its everted hypertrophied lips, honeycombed with nabothian cysts, palpable under a granular surface that bleeds on the slightest touch—all of these, in their varying degrees of intensity, constitute a clinical picture so familiar as to require no special delineation.

Chronic endocervicitis is primarily and essentially an infection of the deeply situated terminal tufts of the endocervical muciparous glands. These glandular saccules harbor the infecting organisms for years or a lifetime. Their distention from duct occlusion produces the familiar nabothian cysts, which may honeycomb the cervical structures or, becoming purulent, riddle it with miliary abscesses, as shown in the illustration.

It is an axiomatic surgical principle, in the control of all infectious processes, to direct our therapeutic aim at the primary focus of infection. In general and specialistic practice, the escharotic, the dilator and the curet still hold sway as established routine measures, especially for the chronic endocervicitis in the nullipara. Mild escharotics and discriminate dilatation, by promoting drainage, may prove of some benefit in very superficial infections, but curettage cannot be too emphatically condemned in any case.

The curet does not and cannot reach the deeply situated infected racemose tufts of the muciparous glands in the cervical tissues, and it should not injure the utricular tubules of the corporeal endometrium, which is rarely, if ever, involved in the disease, and whose specific functions in menstruation and gestation may be permanently vitiated by the lacerations and inoculations incidental to this time-honored traumatism.

The only positive evidence of chronic corporeal endometritis that I have ever seen, came from uteri that had been cauterized and scraped from one to several times.

For the last five years I have absolutely discarded the therapeutic use of the curet and so far without cause to regret the omission.

In the parous cervices with infected lacerations, the symptoms emanate from the infection and not from the rent in the cervix; nevertheless, surgery takes cognizance of the rent, but ignores the infection: What are the results?

Leonard tabulated and compared the ultimate effects of cervix amputation and trachelorrhaphy, as performed in Kelly's clinic at the Johns Hopkins Hospital during the past twenty years, with the following conclusions: "The presence of marked endocervicitis should be considered as contraindicating simple trachelorrhaphy, for although trachelorrhaphy may render a mild endocervicitis more amenable to treatment, it cannot be considered, like amputation, a curative measure for this condition." On the other hand "10 per cent of the cervix amputations were followed by a decided augmentation of a pre-existing menorrhagia or dysmenorrhea; four-fifths of the women remained sterile, 50 per cent of the pregnancies that occurred in the remainder terminated prematurely, while among the few who progressed to full term, even a larger proportion experienced difficult and prolonged labor."

Similar results have prompted some surgeons to desist from all tracheloplastic attempts during the child-bearing period, preferring to shut their eyes to the existing condition rather than incur its possible aggravation by standardized procedures of questioned efficacy.

To cure endocervicitis, we must remove the entire infected endocervical mucosa. While endocervicitis persists, its symptoms must persist.

The operation of trachelorrhaphy was originally based on the conception that the local and general manifestations of torn cervices resulted solely from gaping flaps, and that a cure of the condition demanded nothing more than a plastic closure of the gap. The operation reproduces the original area of laceration and unites its edges by suture. It is obvious that the curative scope of this procedure is thus limited to the cases in which the infection has not extended beyond the lines of the original tear—a rare condition, for we know today that the functional disturbances following cervical lesions which demand surgical intervention signalize the infectious invasion of the entire breadth and depth of the cervical mucosa, and that the conservation of the invaded areas, within the cervical canal beyond the lacerated edges, is productive of the results tabulated by Leonard.

On the same lines, a partial or low amputation of the cervix eliminates only a part of the diseased cervical mucosa, while a complete or high ablation of the entire cervix for chronic endocervicitis is an unwarranted mutilation of its muscular mechanism.

When a cervix splits during labor, the rent runs practically in the direction of its muscle fibers. When the cervix is amputated, its muscle fibers are severed transversely. The spontaneous tear, unless infected, exercises but little influence on the muscular mechanism, while the transverse ablation destroys it completely.

To summarize briefly the reason and remedy for the detailed operative failures, I would state that the cure of a chronic endocervicitis productive of local and general manifestations, whether in the nulliparous or multiparous cervix, demands a complete enucleation of the entire endocervical mucosa, *the preservation of its muscular structure* and the accurate relining of its denuded canal by an ample cylindric flap from its vaginal sheath to obviate cicatricial contractions.

In a previous article on "Tracheloplastic Methods and Results," I have submitted an operative procedure which fulfills the pathologic indications and technical demands as enumerated.

The operation is applicable to infected nulliparous or multiparous cervices alike.

Omitting, for this occasion, all technical considerations of a purely surgical nature, the clinical aspects of the subject may be tersely summarized as follows: Where we were taught to diagnose "Chronic Endometritis" we must learn to recognize a "Chronic Endocervicitis" with its sequellae, a condition in which dilator, tampon and escharotic are absolutely futile, while the curet is not only futile but frequently injurious.

Discussion of Dr. Sturmdorf's Address.

Dr. Hussey: It has been a great benefit, I assure you, to hear Dr. Sturmdorf's remarks today, and I am somewhat familiar with his views, yet I think it all the more interesting to hear the man himself express himself so well and so clearly as he has this afternoon.

It is a long step from the ideas which are being employed today to possibly a matter of twenty years ago when I was receiving my first instructions in the hospital in New York. I can remember even then that any woman presenting a pathological condition who was not subject to fainting on manipulation was very certainly curetted, and yet the result was very far from satisfactory. I can remember that most of the cases in a clinic would return time and time again after a most thorough curettage. I think they had what was termed in those days, endometritis. Eventually those patients were pretty apt to come back again.

Now Dr. Sturmdorf has said that the thoroughness of clinical diagnosis was based upon the wrong conception of the function and structure of the endometrium. The process of the endometrium is for the purpose of the reception and development of the ovum, and nature has thrown about that structure a very great safeguard against infection. We used to see and to find cases where the body is sensitive and more or less painful. That sensitiveness comes from the lymphatics and travels up along them. I think the more modern and correct ideas of the infections of the cervix involving the tubes and tubular inflammation through them is going to result in a much more rational survey in the future. Very few of us use curettage now as in the old days.

I want to express my appreciation again to Dr. Sturmdorf.

Dr. I. H. Noyes: Dr. Sturmdorf's work has certainly given us all a much better understanding of the cause and proper treatment of these cases. In his paper published in 1916 he pointed out very clearly how the infection of the cervix travels through the muscular layers of the uterus up to the ..... covering of the tubes and ovaries,

and in that way interfering with the normal functions of these organs. It would seem to explain admirably the cause of many of these cases which we speak of sometimes as trephine ..... where there is a minimum of pressure, and we do not find on examination any pathology which we think would account for it. If this infection starting from the cervix is caused the way Dr. Sturmdorf shows us, the new facts in the matter account for the conditions in many of those cases.

His operation for endocervicitis, details of which he did not go into, as possibly most of you know, consists of removing a cone of the cervix, including all the endometrium lining the cervix from the external to the internal os, with the pointed end of the cone at the internal os, and then carrying in to line this cavity a cuff of the outer covering of the cervix. That operation undoubtedly enables one to remove a great deal of diseased tissue with the least amount of healthy cervical tissue, so that it leaves the patient with more of the cervix than any other operation which would accomplish the same result.

I should like to ask Dr. Sturmdorf if he feels that the incident of abortion in these cases to patients who have had this operation done and later become pregnant, if they are any more liable to miscarriages. Of course they have not as much cervix as before and the outer portion of the cervix is thick.

I would like to say that anyone who is interested in vaginal plastic surgery would certainly make a mistake if he has an opportunity to see Dr. Sturmdorf operate and does not take advantage of it.

Dr. Keefe: It is a pleasure to me to listen to a man who has made such an extensive study of this subject. He has convinced me that he is on the right track. Years ago we put those sharp curettes into the uterus. When we stop to think, if we put them in the mouth or nose, what would we have left? We have seen curettes tear off mucous membranes a tremendous amount of clean tissue. Although I have used the curette in many of the cases following abortion, I do not think it is a good thing to use a curette. I have been feeling that way a long time. Use the finger and clean out what is in the uterus without using a curette at all.

I have felt that the lymphatic system is not the only way infection is carried. Because it does travel through lymphatics convinces me that a lot of those things will pass through the blood vessels. I do not think we ought to lay aside the vascular system as a means of infection.

I often spoke with Dr. Emmons at Narragansett Pier in the summer and talked with him about his operations. He said he amputated the cervix. It would be desirable not to use that operation in women in the child-bearing period. But if it is necessary, an amputation of the cervix is an excellent thing to do. Dr. Sturmdorf can do that beautifully. It is rather a difficult thing for the average one of us to carry out.

He has convinced me from his description of the membranes lining the uterus that we will do harm rather than good in curetting.

THE USE AND THE ABUSE OF PITUITARY EXTRACT IN OBSTETRICS.*

By Bertram H. Buxton, M.D.
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The one reason I have attacked this tremendously written up subject is the fact that in spite of the accumulated evidence that has been heaped up before us, many practitioners still continue to use pituitary extract, if not indiscriminately, at least many times unwisely, as evidenced by the end results seen in our hospitals.

It might be interesting to compare in the literature a *résumé* of the use of ergot and the final conclusion arrived at after years of experimentation, with that of pituitary extract in so far as its use has progressed up to the present time.

Ergot was used in obstetrics by the recognized medical profession as early as 1808,[1] and it might be interesting to read to you the conclusions of an article written by W. P. Dewees, Professor of Midwifery in the University of Pennsylvania in 1828.[2]

"The following rules for the use of the ergot, if attended to, I think will prevent any evil following its exhibition.

"1st. It should never be given before the membranes are ruptured, the os uteri dilated, and the external parts disposed to yield.

"2nd. It must not be used so long as the natural pains are efficient and competent to the end.

"3rd. But, should they flag, from any cause, it may be given; provided the labour be a natural

labour according to our acceptation of the term 'natural labour'; that is, when the head (if well situated), the breech, the feet, or the knees, present. For, independently of any accident which may complicate the labour, it is sometimes desirable, for the safety of the child, to hasten it when the natural powers are incompetent to this end.

"4th. And if the labour be accompanied by any such accident as flooding, convulsions, syncope, etc., it may sometimes be employed to great advantage, provided rules 1 and 2 are not violated.

"5th. It may be used very often with much advantage in every kind of premature labour; and at full time, when the placenta is not thrown off, and the uterus is found in a state of atony.

"6th. Where flooding takes place after the rupture of the membranes; the os uteri well dilated; the pains feeble, but the child well situated.

"7th. Where the head of the child has been left in the uterus by being separated from its body.

"8th. Where the uterus is painfully distended by coagula."

He also makes the statement in this article that "further, I am certain that I do not now use forceps once, where formerly I used them ten times."

We see from these rules how similar these indications are to those in which pituitrin was recommended by its earlier exponents.

In spite of the favorable experience of Dr. Dewees and many others, including that of Dr. Ryan[3] in 1831, even up to a date as late as 1882,[4] when there was a long discussion by the American Gynecological Society in which many favored and many did not the use of ergot in early labor cases, it was not until almost a century had passed that the majority of trained obstetricians have come to the conclusion that ergot is an unsatisfactory drug to use before the placenta is expelled.

Now let us turn to the experience with pituitary extract as shown in the literature up to the present. It was in 1909 that Blair Bell[5] first used clinically extract from the posterior lobe of the pituitary body, and demonstrated its action. Since that time it has been more and more extensively used, and the literature[6] on the subject has been voluminous. First everything was reported favorably, particularly from Germany, where its use was extremely popular; one distinguished gentleman going so far as to say that instead of sending our young doctors out with forceps, all that they needed was a package of ampules of pituitary extract and a hypodermic syringe. Its spread continued and was first used in this country extensively in the South, and reached a point where country physicians practically used it as a routine measure. It has even been used indiscriminately by some midwives with disastrous results.

It was not until about 1913 that reports began to come in of some not so favorable results. Edgar[7] then reported cases of fatal compression of the foetus from its use in early first stage, premature separation of the placenta or even rupture of the uterus. Polak[8] reported a case of rupture of the uterus, and stated that the extract had no place in first stage. Kosmak[9] points out that the clinical action of pituitary extract may result in severe lacerations or complete rupture of uterus, and also post partum hemorrhage and asphyxiation of the child are apt to occur. Dr. Lee is quite opposed to its use and made the statement at the Gynecological Section of the A. M. A. in Boston that pituitary extract had no place in obstetrics during the labor. Mundell[10] in 1915 analyzed the results following the use of pituitary extract in 3,952 obstetric cases, and later reported 1,293 cases collected during 1915 and 1916, as follows:

	1st Series	2nd Series
Total number of cases	3,952	1,293
Uterine rupture	8 (1 in 494)	12 (1 in 106)
Foetal deaths	27 (1 in 146)	34 (1 in 38)
Asphyxia pallida		41 (1 in 32)

These few reports[11] are only a very small minority of the number of fatalities found in the literature, and no doubt those reported are a much greater minority of those which actually happen.

As regards the child, the dangers reported are, an increased danger of intercranial hemorrhage from increased pressure, and also a danger of asphyxia pallida. There have been numerous reports of convulsions occurring in the child after the mother had been given pituitary extract prior to delivery.

So we see the tendency is working more and more towards the same conclusion that was reached after a century's experience with ergot. Now what is the difference in action of ergot and pituitary extract? Rucker & Haskell[12] have by several ingenious methods worked this out. By means of a Vorhees bag inserted in the cervix and this in turn attached to a manometer, they have obtained some very interesting drum records of

the action of both ergot and pituitary extract in the first stage, and then by means of the "external hysterography" of Rubsamen, they also have some records of uterine contractions in the third stage, following injections of ergot and pituitary extract. They came to the following conclusions:

"That the action of ergot and hypophysis solution upon the uterus is the same if large doses of ergot are used.

"The action of pituitary preparation is much much powerful than that of ergot.

"The action of both drugs varies greatly with different individuals."

Now it may come to pass that pituitary extract in time will meet with the same objections to its use before the placenta is expelled, and be held in the same disfavor, as is ergot in its use before that time.

But in the meantime we have a great many well trained men who recommend its use highly and use it constantly.

Use in Induction of Labor.

Watson[13] of Toronto has reported a wonderful success in the induction of labor with pituitrin, but more especially with a combination of castor oil, quinine and pituitrin. His procedure is as follows:

"1.	Castor oil	oz. i at 6 P. M.
"2.	Quinine hydrochlor	grs. x at 7 P. M.
"3.	Enema	at 8 P. M.
"4.	Quinine hydrochlor	grs. x at 9 P. M.
"5.	Quinine hydrochlor	grs. x at 12 P. M.

"If labor pains do not begin by 9 A. M., i. e., fourteen hours after the first dose of quinine, pituitary extract ½ c.c. is given intramuscularly. If labor pains begin, no further dose is given, but if there is no result, or if the pains initiated by the drug begin to pass off, the pituitary extract is repeated in half an hour. Further doses at half-hour intervals are given, up to a total of six doses, if necessary. If labor is then not definitely begun treatment is stopped, and a similar attempt with pituitary is made the next day, and if necessary the day after that."

In cases where he failed to induce labor by these means he used bags or bougies. He reports successful inductions in 90% of 250 cases, without untoward effects. Other writers, notably Cron,[14] Seeley, Mundell, Bandler, Stein, and Wilson, have also reported good results, but not as good as Watson's, by using smaller doses of pituitrin in 5 to 10 minims. I have only used pituitrin in a few cases for this purpose, and with the smaller doses have had success in the majority of these.

Use in First Stage of Labor.

There are some men who advocate its use in the first stage. Bandler[6] of the Post Graduate of New York being one who uses it in almost every case where there is no dystocia present. If after careful examination of the patient there is found to be no obstruction to delivery, he believes that pituitrin should be used in both principara and multipara in small doses, 1/3 of a c.c. and repeated when necessary every half hour. He is very enthusiastic, and after reading his article alone, one would come to the conclusion that obstetrics was at last made a simple process. He makes the statement that "now he never spends more than two hours in the house of any multiparous patient." On the other hand the vast majority of men do not advocate its use in the first stage of labor. In my own personal experience I have only used it in the first stage in a few cases, and then only when the cervix was soft and easily dilatable, and where there was present some uterine inertia and no other abnormality. In cases where pituitrin is used indiscriminately in this stage, I believe that the danger is greatest of ruptured uteri, badly lacerated cervices or perineii, and fatal compression of the foetal head or asphyxia. If cases have not been thoroughly examined for disparity between foetal head and pelvis or other obstruction, the danger is increased a great deal. The action of pituitary extract is in the nature of a tonic contraction,[12] at least for the first few pains, and these contractions have been registered to last as long as 35 minutes.[11] If the child's head or even the child itself is under compression for that length of time, the danger of foetal death is evident.

Use in Second Stage.

This is the stage where there is more agreement as to the advisability of using the drug, although there are many who condemn its use even at this time. When the labor has progressed to the second stage, and the head has descended to the perineum, rotated anteriorly, and through *inertia* of the uterus *alone* is unable to be expelled, I believe

that pituitrin works in most cases like a charm. It is well, however, to be scrubbed up and ready with your anaesthetic, nitrous oxide or chloroform to control the strength of the pains, for I have found in my experience that if pituitrin is going to work at all it will work quickly and actively within 3 to 10 minutes. Most of cases in which I have used the drug during labor have been in this stage, and I have never seen any untoward effects as regards the child. As regards the perineum, however, I have had to watch sharp many times to avoid tears. I have used ½ c.c. of Burroughs & Welcome preparation, which I believe is about twice as strong in action as the Parke Davis extract.

The majority of writers, and I believe rightly, condemn the use of the drug in any case but uterine inertia. Why, if there are good, substantial contractions, should we forcibly drive the head through the pelvis in the hope of saving an hour's time, to the detriment of the pelvic floor and added compression to the child's head? I have in mind a principara whom we have recently discharged from the City Hospital after a three months sojourn there. She had acute gonorrhea before delivery and was progressing satisfactorily in her labor, according to her story, but was given pituitrin and the baby was born after one tremendous pain, tearing cervix and perineum to the rectum, dragging the bladder from its pubic attachments. This was followed by a tremendous gonorrhoeal infection of the bladder, which was extremely obstinate in treatment because of the marked prolapse. The patient suffered excruciatingly from tenesmus for months, and is now a nervous wreck —all from the use of one hypodermic of pituitrin.

Use in Third Stage.

Most writers believe that in the large majority of cases pituitrin can be used safely in this stage. The only exception might be in cases of adherent placentas, where the contraction of the uterus might make later delivery of the placenta more difficult. Observers who have used the drug in this stage have reported diminished loss of blood, shortening of the length of the third stage with spontaneous delivery of the placenta in a larger proportion of cases than normally.

For post partum hemorrhage I give pituitrin generally in 1 c.c. doses, followed directly by 30 minims of ergonne hypodermically. The pituitrin acts more quickly and emphasizes the action of the ergot, which has a more continued action. I believe that it is extremely valuable in these cases, and if reserved for these cases only, would be certainly uncondemned.

Uses in Caesarian Section.

Pituitrin is valuable in this operation, generally being given just prior to the primary incision and repeated as the placenta is being removed. More recently 1 to 2 c.c. have been infiltrated into the uterine incision to facilitate closure of the uterine wound. It is very often repeated in small doses post-operatively with good effect.

Conclusions.

1. Ergot and pituitrin are very similar drugs in their action, pituitrin being much the stronger of the two. According to the literature, they have passed through similar cycles in their uses up to a certain point, and it may be possible that pituitrin will finally be relegated to its use in the third stage even as ergot has.

2. Pituitrin is a dangerous drug to be used indiscriminately, its main dangers being uterine rupture, severe lacerations of cervix or perineum, premature separation of placenta, post partuum hemorrhage, fatal compression of the foetal head, or asphyxia of the child.

3. It has been used successfully in the induction of labor near term, especially combined with castor oil and quinine.

4. It should be used in the first stage practically never, and then only after extreme care has been taken to exclude any existing obstruction, bony or otherwise, and only when the cervix is easily dilatable, and in the presence of uterine inertia.

5. In the second stage it can be used in selected cases; in the presence alone of uterine inertia with the head on the perineum in the anterior position, the obstetrician scrubbed up, with anaesthesia at hand to control pains, it may be given in ½ c.c. doses. It should never be given to hurry labor in the absence of inertia.

6. It is useful in the third stage of labor to lessen bleeding, shorten the stage and help expel the placenta.

7. It is extremely useful in Caesarian Section and in post partum hemorrhage in conjunction with ergonne.

Bibliography.

[1]Account of the Pulvis Parturiens, a remedy for Quickening Childbirth, a letter from Dr. John Stearns of Saratoga County to Mr. S. Okerly, dated Waterford, Jan. 25, 1807, Medical Repository, Second Hexade, 1808, V. 308.

[2]Am. Jour. Med. Sc. 1828, i 251.

[3]A Manual of Midwifery, 1835, p. 137.

[4]Report of the 7th Annual Meeting of the American Gyn. Soc., Amer. Journal Obst., 1882, XV, 929.

[5]Brit. Med. Jour., 1909, ii 1609.

[6]Pituitary Extract in Obstetrical Practice, Watson, The Canadian Med. Assn. Journal, Vol. iii, No. 9, page 739. Watson, Am. Jour. Obstet. & Gyn. 1920, i 70. Bandler, S. W.: The Value of Pituitary Extract in Obstetrics and Gyn., 1916, Am. Jour. Obstet., 1 XXIII, 77. Stein, A., Am. Jour. Obstet., 1919, LXXX, 470; Am. Jour. Obstet. & Gyn., 1922, iii 170; Crom, Amer. Jour. Obstet. & Gyn., 1922, iii, 300; Jour. Am. Med. Assn., 1921, LXXVI, 1390; Am. Jour. Obstet. & Gyn., 1922, iii, 134.

[7]Edgar, J. C. J. A. M. A. 60, 1733 (May 31,) 1913.

[8]Polak; Obstr. J. A. M. A. 60, 1734 (May 31) 1913.

[9]Kosmak, G. W.; J. A. M. A. 71; 1117, Oct 5, 1918.

[10]Mundell, J. J.; Am. J. Obst. 73; 306 (Feb.) 1916; J. A. M. A. 68:1601, (June 2) 1917.

[11]Rucker & Haskell; J. A. M. A. 76 (May 21) 1390, 1921.

[12]Rucker & Haskell; Am. Jour. of Obstet. & Gyn., 1922, Vol. IV, Dec., 608.

[13]Watson, B. P. Am. J. of Obstet. & Gyn., 1922, Vol. IV, No. 6, 603, and Transactions of Am. Gyn. Society, 1920, Abst. in Am. J. Obst. & Gyn. i No. i 70.

[14]Seeley, W. F.; Jour. Mich. State Med. Soc., July, 1914. Mundell, J. J.; Jour. Am. Med. Assn. 1917, LXVIII, 1601. Stein, A.; Am. Jour. Obstet. 1919, LXXX, 470. Wilson, H. C.; Med. Jour. Australia, 1918, i, 171.

Contributions

MOONSHINE ASPHYXIA

By Dr. L. L. Albert
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The common amyl alcohol is iso-butyl carbinol. It is frequently formed in small quantities during the fermentation of corn, potatoes and other substances. When the alcoholic liquors are distilled, amyl alcohol passes over toward the end of the distillation generally accompanied by propyl, butyl, other alcohols and by certain ethers and compound ethers. A mixture of these substances is known as fusel oil, and from this liquid amyl alcohol may be obtained in pure state. It is an oily, colorless liquid, having a peculiar odor and a burning acrid taste, soluble in alcohol but not in water.

A diluted solution of grape sugar under the influence of certain elements (yeast suffer decomposition, yielding carbon-dioxide and ethly alcohol. About 95% of the sugar is decomposed, the rest forming glycerine 3%, succinic acid 5%, and fusel oil (the higher alcohols).

Among the foreign population, and sometimes higher up, a new form of poisoning (asphyxia) occurs since the advent of the 18th amendment.

This high, pentrating, acrid odor from the distillation of alcohol is, in small, closed-in areas, fairly poisonous. While not odorless, it is difficult to detect. But it is very noticeable when one comes in from the open fresh air to the contaminated area. I should say it is as poisonous as illuminating gas in the same concentration, and causes the same train of symptoms. Nevertheless, the moonshine-making public apparently is ignorant of these dangerous consequences.

In the open, the noxious gases emanating from the distillation of alcohol are diluted with air sufficient to remove all toxicity; but in small rooms or enclosures the smell is enough to make the air distinctly disagreeable, even if not positively unhealthful. Doors and windows are usually barred to prevent the odor from escaping and to avoid detection.

The gases of moonshine distillation are cumulative and progressive, resulting in secondary anemia, nervous disorders, headaches, malaise. The remedy is, of course, plain to law-abiding people.

What the ultimate effects of such frequent, subacute asphyxiations may be, is a problem on which there is not yet sufficient evidence to justify positive assertions, but tuberculosis must be considered as a possible complication.

Fatal cases, I have never seen, nor have I ever heard reported. The result is not impossible, as I have treated as many as twelve children and adults in one house, all of them sick enough to stay in bed for two days. The odor is very persistent, and even with windows wide open, it takes quite some time to get rid of the smell.

The treatment of cases is, of course, the same as any other asphyxia whether due to illuminating gas, sewer gas or automobile exhaust gas;—that is, fresh air and tonics.

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EDITORIALS

PHYSIOTHERAPY IN MEDICINE.

We physicians, by reason of our training and traditions, are conservative folks; we are little given to invoking strange gods and it is quite true to say that no honorable member of our profession has ever been the protagonist of fanaticism. But conservatism has dangers of its own, not the least of which is the tendency to cling to the old ways of doing things — a tendency which, by reason of its very respectability and prestige, is likely to conceal its closeness to obscurantism. Every new idea, every original or novel method of treatment, has had to fight its way to acceptance. And as in the past, so in the present, this process is going on, with the result that we observe physiotherapy struggling to gain for itself a place in the hierarchy of medical orthodoxy.

It is no strange thing surely, when one stops to reflect for a moment, that the diverse forces of nature, subdued to the uses of man, should prove of value in the art of healing. For if natural products such as plants and minerals have for centuries helped us in our ministrations, why not also

those other equally, perhaps more potent forces, light, heat, water and electricity? We do but strain out the gnat and swallow the camel when we look askance at these latter because they have been too often used by charlatans and quacks, for who but a peasant woman in Shropshire gave us digitalis, and did not the Indian introduce to us quinine, while if we are fastidious, we shall not inquire too minutely about the company mercury has kept. There is wisdom in the remark of Aristotle that it is not things themselves, but the uses to which they are put which ennoble or degrade. If we physicians do not elevate physiotherapy as we have tried to elevate drug therapy and psychotherapy, then it is certain that irregular practitioners will continue to exploit and degrade it.

The worst enemies of physiotherapy have been, and are, its friends. When you finish reading the average book on the subject you lay it down with the feeling that you have been reading not the sound conclusions of a critical mind but rather the enthusiastic encomiums of a man whose judgment leaves something to be desired. You are fed, sometimes even fed up, on vague generalities, instead of being presented with the solid pabulum of fact, and of course you gather the impression that the whole business is a department of fiction. But it is not fiction — the war proved that. What is lacking in much of our physiotherapy is the scientific spirit, the attitude of mind which verifies hypotheses and brings general principles to the test of properly controlled experiments. What would be thought of a man who prescribed digitalis indiscriminately on the belief that "digitalis is good for dropsy?" Well it is no better with the man who orders electricity or massage or cold bathing on the principle that they are "good" for something or other. What we need, and need sorely, is the knowledge as to when and how and precisely in what morbid conditions we may with benefit resort to the various modes in physiotherapy. This knowledge we do not possess except in a fragmentary way. The future will no doubt supply it; and when it does we shall have added yet another useful string to our therapeutic bow. In the meantime we may, perhaps, by patient endeavor learn something from the critical evaluation of our own experience, enough at any rate to guide us until such time as more extended clinical studies shall have established standards of permanent validity.

PRO BONO PUBLICO

Recent newspaper articles, often the only way in which news reaches the medical and lay public, would seem to indicate that a change is taking place in that branch of medical thought which deals with health problems, and that one must readjust one's conception of the proper and particular functions of Health Departments. While most persons understand something of the microbic origin of most diseases they are as yet uninformed as to those less well known problems which affect our comfort and convenience. Until now it has been supposed that offensive odors, unnecessary noise, unsightly premises, untidy streets, polluted streams and divers other offenses against civic decency were problems to be solved by that branch of our State and City organizations which had to do with public health, and which were founded and fostered for those purposes and with these things in mind.

With the development of our cities new problems, such as air and stream pollution, have arisen, problems upon which much might be written. And it appears that there is a growing tendency on the part of our health officials to devote their attention to those features only which are known to be the direct cause of specific disease. For example, —it is known that an epidemic of sore throat may come from an infected milk supply and that diphtheria can come only from the K.L. bacillus through some transmitting medium. The health department will prosecute the study of such cases with unrelenting vigor. But let a factory chimney emit fumes which cause or seem to cause an irritated throat, and a feeling of malaise and nausea, and the health department is not interested because real disease and death does not result. To illustrate again,—the public health is guarded by frequent examinations of the water supply, but untreated sewage is allowed to flow into our streams and into the sea, thereby polluting fish, shell fish and bathers and rendering the shores unsightly and foul. In the matter of sewage disposal a large and prosperous community of this state has by overwhelming numbers vetoed the installation of a modern system of sewerage. No campaign of education has been urged to teach communities that sewerage and civic decency are one and the same thing, so householders of this com-

munity will continue to deposit their waste in their back yards, for years to come.

Nor is the City of Providence blameless in this respect, nor has it among its many progressive campaigns launched one for a bigger and better sewerage system or for cleaner sanitary conditions. Flowing through the very heart of this fair city is a nasty, foul-smelling and stinking stream, a disgrace to any municipality. The condition of these streams has improved but little in the past twenty years. Foul odors and unsightly streams may not cause definite disease and distribute specific pathogenic organisms, but they destroy our comfort and peace of mind, to both of which, in this day of culture and civilization, we are entitled. There are, emptying into the Seekonk river, no less than five sewers between Red Bridge and Butler Hospital, and it is an every day matter to see human feces floating about. The management of some cities resembles that of an individual of moderate means who spends his money on rose gardens and gives his children music lessons but continues to use the old-fashioned country out house.

Not long ago the menace of lead in drinking water was urged by physicians and the chemist of the State Board of Health. Two sorts of opinions were formed by the medical profession, that which felt that "there is nothing in the lead matter" and the other that it was neither wise nor wholesome to drink dilute solutions of lead or of any other irritant poison. The lead menace still obtains; current examinations of the water supply showing 0.22 milligrams per litre or parts per million, an amount which is distinctly detrimental to health. But the City of Providence continues to use lead pipe for service connnections and will continue to do so until there is sufficient interest shown by the medical profession or the informed public. The same public servants who dumped untreated sewage into the Providence river for four years are not going to be bothered by a trifle of lead.

Admitting for purposes of argument that noise, filth, dirt, inadequate sewerage systems, etc., do not cause actual disease, it does not follow that nuisances should be allowed or encouraged, a thing that would immediately come about were this novel idea as to the functions of health departments to prevail. It is impossible to turn these matters over to the police, this is simply "passing the buck." There are not enough policemen anyway, and the city is none too well protected.

The time has come for this city and state to clean house, to provide a modern and adequate system of sewage disposal, to clean up the malodorus and infamous Providence River, to give the several health departments police powers and sufficient funds and support for the proper performance of their duties, to enact and enforce regulations for quiet rest hours, to insure an uncontaminated water supply, and to educate its children in civic as well as personal hygiene.

SCIENTIFIC MEDICINE AND ITS POSSIBILITIES

Medicine has shown remarkable achievements during the last half century, indeed, during this period there has been more real progress than in the preceding five hundred years. Antisepsis in surgery, the work of Lister and others, was a distinct step in advance. This was followed by asepsis, the basic principle of modern surgery as opposed to ancient methods.

The development of bacteriology, pathology, biological chemistry, etc., opened up new fields of endeavor and really laid the foundation for scientific medicine, as we know it. Through these newer branches of medicine, the causative factor in tuberculosis, typhoid fever, diphtheria, syphilis, gonorrhoea, malaria and yellow fever, etc., was given to the world, and so was of inestimable value in making a diagnosis in these diseases. With more knowledge of these diseases, came better methods of treating them as well as, to an extent, preventing them.

This increased knowledge has been the means of lessening the mortality rate in general but not to the extent that it should have done, as regards preventing the vascular degenerative changes of senility. This is probably explained by the enormously increased hurry and worry of modern life. Again, according to the authorities, the most important single item of mortality, is the record for the first year of life, because of the fact that 15 per cent of all deaths that occur each year, are of children in the first year. In 1921, however, in the Birth Registration Area of the United States,

the infant mortality dropped to 76 per 1000 births —in many United States cities it is below 40. The mortality in the years of childhood can be further reduced by a more whole-hearted effort to control typhoid, scarlet fever, diphtheria, whooping cough, tuberculosis and the respiratory diseases.

Preventive medicine has already accomplished notable results, by its efforts to decrease industrial accidents, to secure more sanitary working and living conditions and by urging an annual complete physical examination in all persons, who have reached the fourth decade of life.

OBITUARY

GEORGE EATON SIMPSON, M.D.

George Eaton Simpson, M.D., Assistant Superintendent of the State Hospital for Mental Diseases, Howard, Rhode Island, died on July 9, 1922, in the fifty-second year of his age.

Dr. Simpson was born in Charlestown, Massachusetts, on December 15, 1870. He was a member of an old Maine family, being a son of Myrick and Laura A. (Sawyer) Simpson, and a grandson of John and Sophronia (Doyle) Simpson, all natives of that State.

When a small child his parents removed from Charlestown, Massachusetts, and later returned to the State of Maine, taking up their residence in the town of Newcastle, where Dr. Simpson received his preliminary education, fitting for college at the Lincoln Academy.

Dr. Simpson was graduated from Bowdoin College in the class of 1895 with the degree of Bachelor of Arts. Following graduation he was the Principal of Washington Academy at East Machias, Maine, for a year. He determined to take up medicine as a profession, and, with this end in view he then entered Bowdoin Medical College and received the degree of Doctor of Medicine from that institution in 1899.

Immediately upon his graduation he received the appointment of interne to the State Infirmary and to the State Hospital for Mental Diseases at Howard, Rhode Island. On the completion of his interneship, he engaged in private practice in the City of Providence and while so engaged he was appointed in 1901 visiting physician to the State Prison and Providence County Jail.

In 1905 he was appointed by the Board of State Charities and Corrections Assistant Superintendent to the State Hospital for Mental Diseases at Howard, Rhode Island. He relinquished private practice at this time to enter upon this office. For sixteen years he devoted himself assiduously to the duties of this responsible position.

The whole period of his connection with State service covered twenty-two years. He had a broad acquaintance throughout the State and was recognized by both the medical and legal professions as an able physician and psychiatrist. His services were not infrequently sought as a specialist in mental diseases before the courts of Rhode Island. The natural trend of his mind gave him a taste for painstaking inquiry into all the aspects, whether medical, legal or social, which center around cases of mental disease. His ferreting out of the legal settlements of cases committed to the State Hospital who were aliens, either to this country or state, and the consequent returning of them to their homes has saved Rhode Island many thousands of dollars.

Dr. Simpson was a Phi Beta Kappa man and a member of the Zeta Psi Fraternity. He was associated with the local lodge of Independent Order of Odd Fellows. He was a member of the Rhode Island Medical Society, The Providence Medical Association, The Rhode Island Medico-Legal Society, The New England Society of Psychiatry, and The American Psychiatric Association.

In 1902, Dr. Simpson was united in marriage with Minerva Maloon of East Machias, Maine. Three daughters were born of this union. They, with their mother, are left to mourn his untimely death. He also leaves a brother, Edgar M. Simpson of Bangor, Maine, and a sister, Mrs. Fred Hilton of Augusta, Maine.

During a painful illness which continued for more than a year previous to his death, he bore his suffering courageously and uncomplainingly. All who had official relations with Dr. Simpson recognized his untiring devotion to his work and his valuable service throughout all these years to the State of Rhode Island, and his many acquaintances throughout the State feel in his death the loss of a sterling member of society.

In his death this Association has lost a member whose memory can be held as a conspicuous example of a man of the highest integrity in all relations of life and one whose professional attainments and years of devotion to his special field of medicine secured for him an honored place in the medical profession.

Arthur H. Harrington
Henry A. Jones
Dennett L. Richardson

HOSPITALS

Rhode Island Hospital

The Crawford Allen Memorial Hospital in East Greenwich closed for the season on November 1, 1923. During the six months during which this summer branch for children was in operation, 110 children received treatment.

Plans have been completed and work started on a new building to house greatly increased X-ray equipment and a new physio-therapy department. It is hoped to have this addition to the facilities of the hospital in operation in about four months.

At noon on November 14 the annual meeting of the Corporation was held at the hospital. Reports of the various departments were read and officers elected for the ensuing year.

On October 27, Dr. John Champlin, Jr., was married to Miss Nita Helen MacDonald in Westerly, R. I. Dr. John A. Bolster, who recently completed his interneship here, has opened an office at 532 Broad street in this city; while Dr. Cyril M. Lydon has begun the practice of medicine at 272 Bowdoin street, Dorchester, Mass.

Recent appointments to the interne staff include: October 1, 1923: Dr. Donald M. Green, Syracuse; Dr. Frank Bostrom, Jefferson, January 1, 1924: Dr. Robert S. Buol, Harvard; Dr. Cecil C. Dustin, Harvard. April 1, 1924: Dr. Charles Farrell, Tufts.

SOCIETIES

Providence Medical Association.

The regular monthly meeting of the Providence Medical Association was held at the Medical Library, 106 Francis Street, Monday evening, November 5, 1923, at 8:45 o'clock.

Program as follows—Paper: Intersusception in adults, Dr. James M. Gallison, Boston; discussion opened by Dr. George A. Matteson and Dr. Raymond G. Bugbee. Paper: Complications following Surgical Operations, Dr. Charles O. Cooke; discussion opened by Dr. Henry J. Hoye and Dr. George Gardner.

The Standing Committee had approved the following applications for membership, William N. Hughes, M.D., Michael J. O'Connor, M.D., Alfred L. Potter, M.D., who were duly elected members of the Association. Collation followed.

Dr. Peter Pineo Chase, *Secretary*

Rhode Island Ophthalmological and Otological Society

The bi-monthly meeting of the R. I. O. and O. Society was called at the R. I. Hospital, Tuesday, October 23, 1923, at 5 P. M., the president, Dr. F. H. Bigelow, presiding.

The minutes of the previous meeting were read and approved. Report of committee appointed to inquire into the visual acuity test required of motor operators in various states, accepted as progressive.

Moved and seconded that this society go on record as favoring legislation requiring the labeling as poisonous all household articles containing caustics, however small the per cent. in each article.

The name of Dr. Francis B. Sargent was recommended for membership by Drs. Hawkins and Leech, and was referred to the standing committee.

There were presented some very interesting and instructive cases in Otolaryngology by Drs. Bigelow and Astle, and in Ophthalmology by Dr. Leech. After the cases were eagerly and interestingly discussed by the members present, a buffet luncheon was served in the home officers' quarters.

Members present were Dr. Bigelow, Dr. Hawkins, Dr. Dowling, Dr. Ventrone, Dr. Messinger, Dr. Leech and Dr. Walsh.

Meeting adjourned at 7:45 P. M.

J. J. Walsh, *Sec'y.*

Standing committee for the year, H. Arlington Fisher, M. D., Christopher J. Astle, M. D., Howard E. Blanchard, M. D.

Washington County Medical Society.

The quarterly meeting of the Washington County Medical Society was held at the Elm Tree Inn, Westerly, Thursday, October 11, 1923, at 11 A. M. Paper: Dr. Briggs on "Diphtheria."

W. A. Hillard, M.D., *Secretary*

CASE REPORT

SPONTANEOUS VERSION.

PROVIDENCE LYING-IN HOSPITAL

Mrs. E. M.—Aug. 23, 1923.—Gravida ii. Full term. One normal labor. Pelvic measurements normal. Labor began at 7:45 P. M. on August 23, 1923. Examination at 11 P. M.

External palpation was very satisfactory because of a flabby, soft abdomen, and revealed a small fetus and a definite occiptal posterior position. Fetal heart was heard best in right lower quadrant, low and close to median line.

Vaginal examination revealed a vertex presentation, membranes intact, cervix thinned out, and external os about three fingers dilated.

One hour later, marked bulging of the perineum was reported and preparations for immediate delivery were made. First to appear through the vulva were the unruptured membranes, which were punctured, and a left hand protruded into the outside world. The uterine contractions were very strong and in about five or six pains the left arm, left shoulder, left chest, left abdomen, left buttock and right buttock appeared in succession at two or three minute intervals. During this procedure the operator's finger was kept in the interspace over the fetal heart and no interferance with the fetal circulation was noted until the buttocks had appeared when the right shoulder and head were rapidly extracted. Child was cyanotic and was resuscitated without difficulty. Weight, 4 lbs. 14 oz.

Dr. Lee states that spontaneous version is not infrequent in transverse positions with large pelves and small children, but this case was a vertex presentation, both by external palpation and vaginal examination.

EARL A. BOWEN, M.D.

MISCELLANEOUS

PRESENT-DAY SOURCES OF COMMON SALT IN RELATION TO HEALTH.

Emery R. Hayhurst, Columbus, Ohio *(Journal A. M. A.)*, comments on the natural deficiency of iodin in diets; yet its scarcity in nature has been long known to geochemists, as well as its infrethen be handled commercially in a manner to requency of occurrence in salt sources by commercial and industrial chemists. While iodin may occur in natural deposits along with chlorin, usually in the form of the sodium salt, it is never obtained from such sources commercially because it occurs in too limited quantities. Chili saltpeter is the chief source of iodin. The sea is the great storehouse of iodin where it completes a cycle from inorganic compounds to organic life and return. The salts of sea water are constant in both quality and quantity. Sodium chlorid comprises 77.8 per cent., magnesium chlorid 10.9 per cent., with many compounds, including sodium iodid, which composes the remaininig 11.3 per cent. It has an average total salinity of 3.4404 per cent. All of the salts in sea water are unusually soluble in plain water. The great solubility of sodium iodid accounts for its almost complete absence from the land surface and, perhaps, for some of the peculiarities noted in regard to the incidence of goiter. Authorities are agreed that goiter is infrequent in both animals and man along the sea. The same is true, also, of some fishes (salmons) which inhabit both fresh water and sea water, tending to develop goiters in the former, and none in the latter. Apparently, sea animals do not have goiter. Practically all salt used in the United States for dietary consumption is obtained from inland sources by the evaporation of brines, which for the most part are inherently free of iodin. Irrespective of the source, whether sea water or inland deposits, the modern processes of preparing and purifying salt free it from all traces of iodin, as well as its other naturally associated elements, many of which are identical with the body fluids of higher animals. Hayhurst points out that of the dependable sources of iodin in nature—sea air, sea food and sea water—it is to sea water, used perhaps in place of common salt as a condiment, that inland dwellers should look. This substitution would appear to offer a complete solution to the iodin deficiency problem, if nothing else, while evidence would tend to show that other constituents of sea water have also an undoubted place in the economy of the higher animal organism, perhaps to the extent of precluding some diseases which are likewise, possibly, of a deficiency type. Common salt for dietary purposes should include not only sodium chlorid but also sodium

iodid, and undoubtedly many of its other original concomitants. For geochemical reasons, great care should be taken in selecting its source, if it is not actually derived always from sea water. It must tain these constituents.

CURE OF INFANTILE RICKETS BY SUNLIGHT.

Nine rachitic infants were placed by Alfred F. Hess and Margaret B. Gutman, New York *(Journal A. M. A.)*, in the direct sunlight for from one-half hour to several hours, the period varying according to the sun's intensity, the clemency of the weather, and the sensitiveness of the baby. Care was taken that the infants were warm. It was found quite sufficient to expose the arms and legs, although it is preferable, when the temperature permits, to expose the trunk as well. Previous to treatment, the majority of infants showed the clinical symptoms of mild rickets, characterized by beading of the ribs, and the characteristic changes in the epiphyses as seen by roentgen-ray examination. All the children were receiving the customary milk mixtures and orange juice, the older ones getting cereal in addition. Reliance was not placed entirely on the roentgen-ray examination of the bones. In every instance in which heliotherapy was employed, the rachitic signs diminished, as was demonstrated clinically and by roentgen ray, and the general condition improved. The inorganic phosphorus of the blood of the rachitic infants decreased from month to month, starting generally below 3.5 mg. per hundred cubic centimeters of blood, and gradually being restored to the normal level of about 4 mg. This result is similar to that which has been attained by means of cod liver oil, which must be considered a specific for this disorder. This observation is of interest both as additional testimony of the curative value of sunlight in this disorder, and as evidence that the curative process occasioned by these divergent therapeutic agents will probably be found to be fundamentally the same. These results establish a chemical basis for the use of heliotherapy in rickets. Furthermore, they furnish the first definite evidence of metabolic change in the animal body brought about by the solar rays.

A PLEA FOR ACCURACY.

Inaccuracy of description is a common sin in medical literature. Some articles give the reader the impression that the author has not been informed that there exist standard systems of weights and measures. We are told that a nodule the size of a chestnut was present in the abdominal wall, or that an ulcer the size of a dime was located on the forearm. These descriptions may mean something to the writer who saw the objects, but they carry much less information than they should to the reader. Too many writers seem to forget that medical literature is international, and that their reports, if of any value, will be read in all parts of the world, and possibly for many years. Just what will the Russian scientist know about the size of a dime? How large is a chestnut? Very different sizes will register in the minds of an Italian and a New Englander. The orange is a popular unit of measurement; but what sort: Messina or Florida? They are as one to five or more. Coins fluctuate from generation to generation, vegetable products vary in size, and many are referred to by local names. What are foreigners to understand by references to such standards of measurement as horse beans, cow peas, footballs (Rugby or soccer not specified), baseballs, bird shot (for snipe or turkey?), ping pong balls or grapefruit? How big is a cherry, a potato, a watermelon? Yet these are used as if centimeters or inches had never been defined. The literature is full of lesions that are "fünfpfenniggross" or "sweimarkstück-gross"; but with the disappearance of metal coins in central Europe, what will these terms mean to future generations? Imagine a scientist in Dutch Java fifty-years from now trying to figure out how large a "fifty kopeck sized eruption" really was. So inaccurate and inconsiderate become the thoughts of men who use such units of measurement that the statements often are even grotesquely vague: we have seen tumors described as the size of a bean, the size of a nut, the size of a bird's egg, and once, most delightful of all, a patient presented a tumor mass "the size of a hat." There's a doctor for you—to whom fashion's vagaries mean nothing! We are still looking for a lesion "as long as a piece of string," and confidently expect to read about it some day.—*Jour. A. M. A.*

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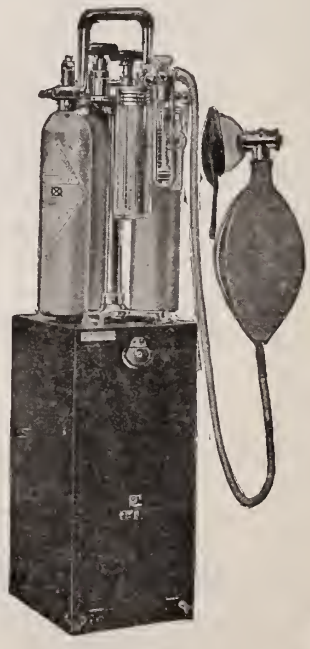

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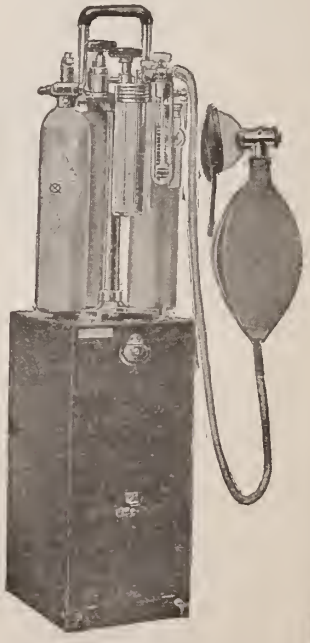

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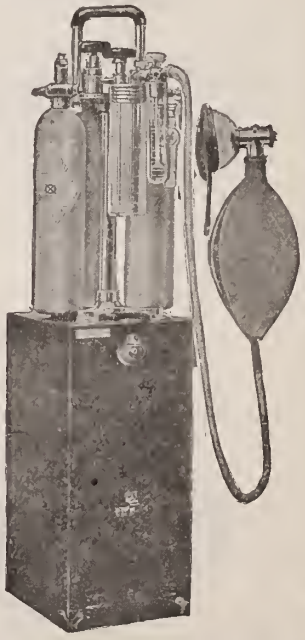

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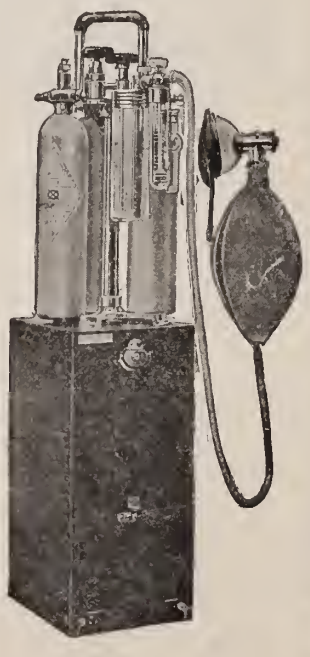

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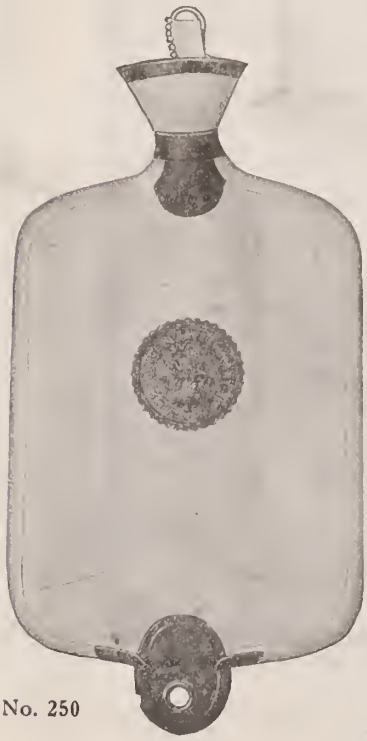

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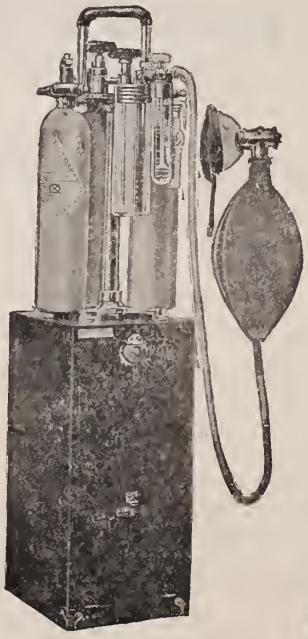

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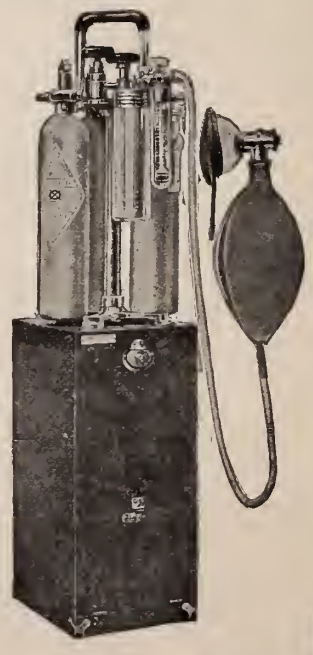

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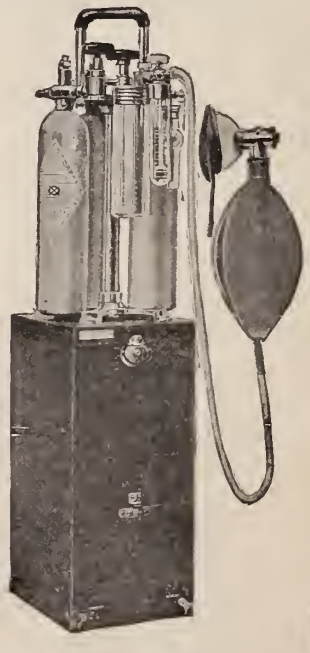

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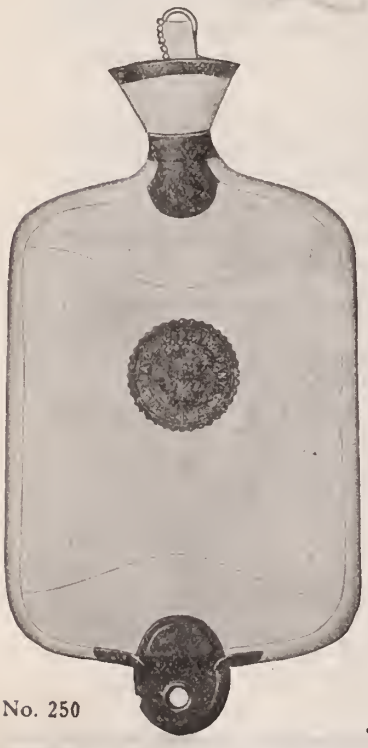

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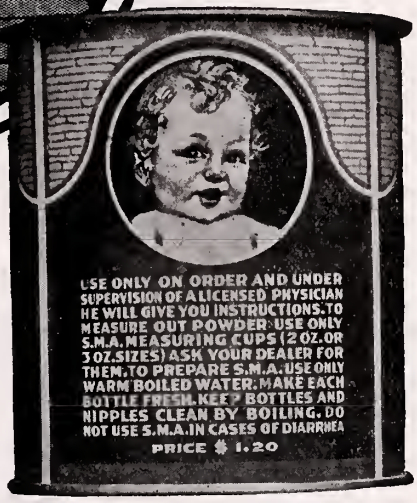
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